Communicate via **Micro network**

Micronet®
Making Communication Easier

User Manual

Pan/Tilt Megapixel IP Camera

Model No: SP5532SP / SP5532SW

Ver 1.2

Model No.: SP5532SW
wireless 802.11n

Model No.: SP5532SP
PoE 802.3af

Contents

Chapter I: Familiar with your Internet IP Camera

1.1 Package Contents

Thank you for purchasing Micronet SP5532 IP camera! Before you start to use this IP camera, please check the package contents. If anything is missing, please contact the dealer of purchase and return the package to claim for missing contents.

	Item Name	Quantity
1	IP Camera	1
2	Antenna (SP5532SW only)	2
3	Power Adapter	1
4	Ethernet Cable	1
5	Software and User Manual CD-ROM	1
6	Accessory kit	1
7	Quick Installation Guide	1

1.2 Basic Introduction

Thank you for purchasing Micronet SP5532 IP camera! This IP camera is an ideal product for all kinds of video-surveillance purposes, like home/office safety, kid/pet monitoring, and remote video acquire etc. Unlink conventional close-circuit video camera; you're not limited to the length of cable! Once this IP camera is connected to Internet, you can receive video from anywhere in the world where Internet access is available.

If you have problem installing a new cable from the place the camera is installed to your monitoring computer, don't worry! This IP camera also supports wireless network, that is, you can link to this camera wirelessly! You only have to provide this IP camera with 12V power by the power adapter that comes with the product package, and you don't have to set a new network cable between the IP camera and monitoring computer.

Worry about the content will be intercepted by unauthorized person when the video is transmitted over the air? That's also not a problem! Unlink conventional analog wireless camera, which video will be intercepted by anyone who got a compatible video receiver, this IP camera supports data encryption (WEP & WPA), which will provide ultimate data security level. All video transmitted over the air is encrypted; therefore no one will be able to get the video captured by the IP camera, expect yourself.

Some people may concern that there will be some places which will not be covered by camera, but this problem is completely solved by this IP camera. With built-in pan-tilt function, you can point the camera to the position where you wish to look at with user interface. You can even define a preset path, and the camera will cruise along the path you defined.

If the environment is too dark, it's also not a problem. This camera equips 9 IR-LEDs and will illuminate automatically when the environment is too dark, and the image captured by this camera will still be clear.

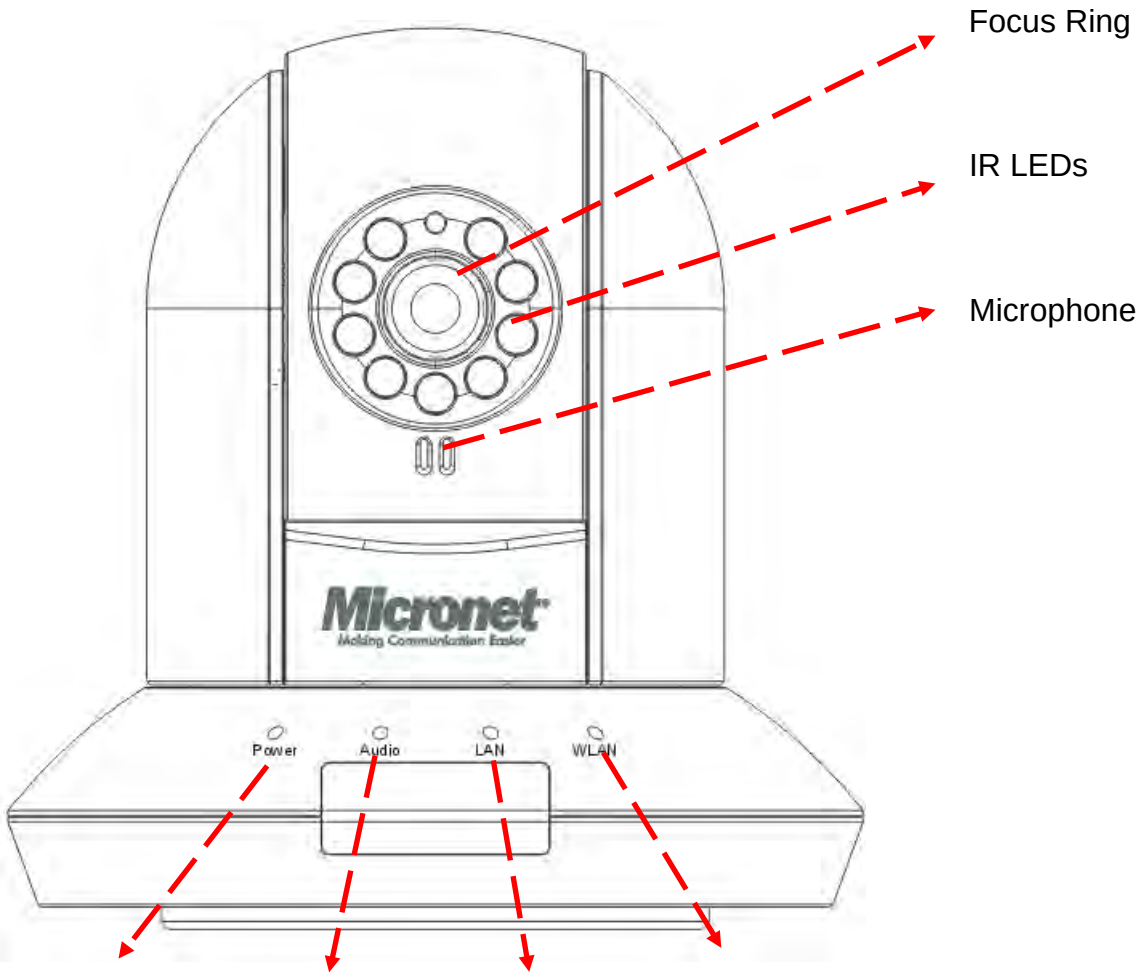
You can discover more useful functions in next section!

1.3 Product Highlights

- No pre-loaded software required - all you need is a browser like Internet Explorer 6 (and above, with plugin installed).
- With supplied video surveillance software, you can connect up to 16 video cameras and view images captured by every camera at the same time.
- Supports 3 video resolutions: MJPG and H.264 SXGA(1280 x 1024), VGA (640 x 480), and QVGA (320 x 240); MPEG4 XGA (1024 x 768), VGA (640 x 480), and QVGA (320 x 240).
- Anti-flicker function (eliminates flash caused by fluorescent lights, 50 / 60Hz selectable).
- Video control functions, like brightness and zoom-in / zoom-out.
- Audio function, suitable for applications like video conference or environment monitor.
- 9 automatically-controlled IR LEDs.
- Wired and wireless network (802.11b / 802.11g / 802.11n) support, supports up to 100Mbps for wired network and 100Mbps for wireless network.
- Wireless data encryption (WEP / WPA)
- Supports DHCP and PPPoE protocol, you can also assign a fixed IP address to the camera also.
- Supports Dynamic DNS (used to allocate the IP camera's Internet address, when the ISP you're using does not assign you with a fixed Internet address).
- Supports UPnP, Windows XP (and above) will discover this IP camera in network neighbor automatically.
- Send captured picture and video by Email or FTP when motion is detected.
- Configurable motion detection sensitivity (6 levels from most sensitive to least sensitive).
- Built-in real-time clock, date and time information will be recorded with every captured picture / video clip (also supports auto time synchronization via network time protocol).
- Upgradeable firmware - enjoy new functions without buying a new camera!
- Supports up to 16 users, and you can set different password to different user.
- Usage and event logging.

1.4 Familiar with Key Components

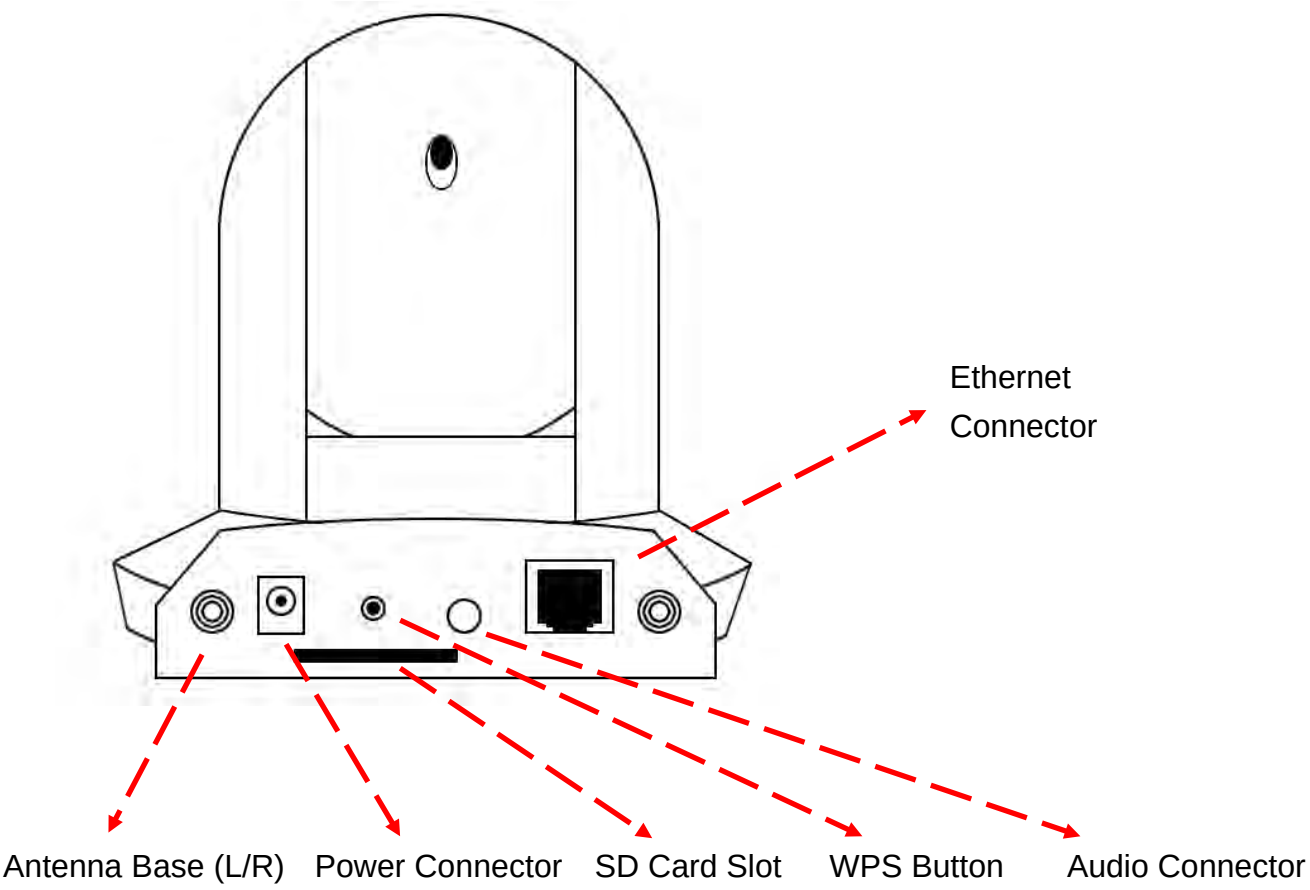
Front View



Wired & Wireless:	Power LED	Audio LED	LAN LED	WLAN LED
POE model:	Power LED	Audio LED	ACT LED	LAN LED

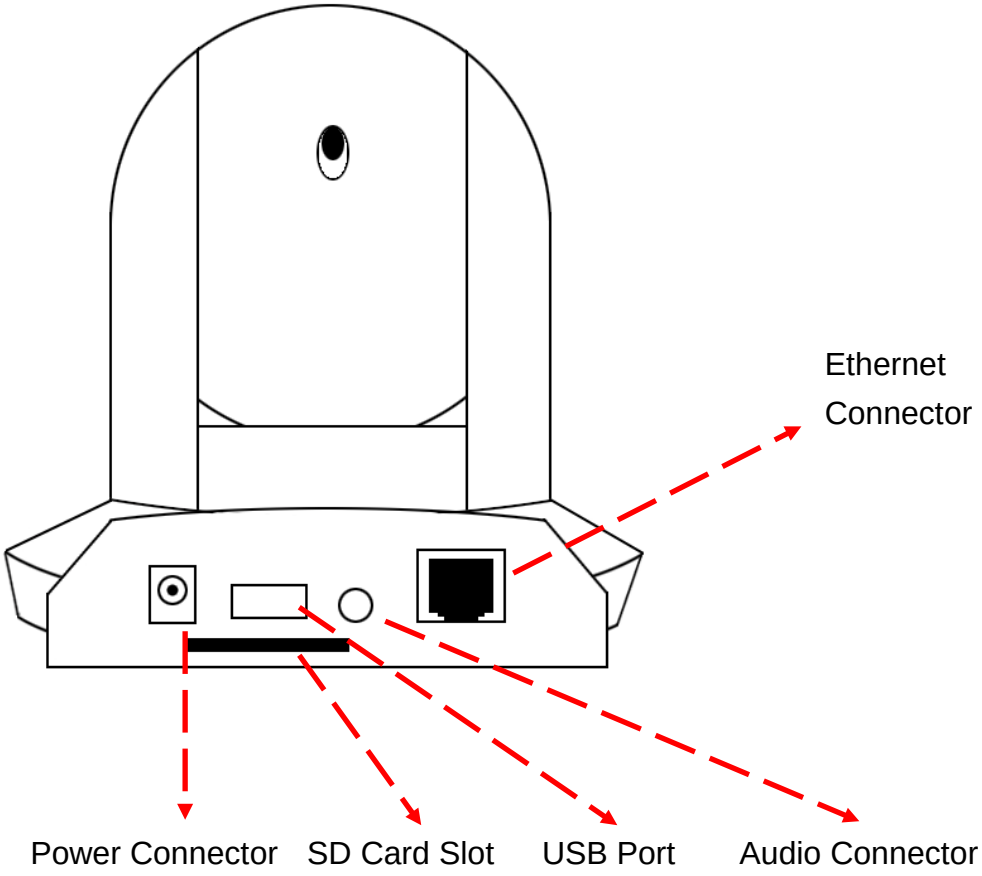
Power LED: Indicates power status
Audio LED: Indicates Audio status
LAN LED: Indicates LAN activity
ACT LED: Indicates Data activity
WLAN LED: Indicates Wireless LAN activity
Focus Ring: Adjusts focus
IR LEDs: Lights up when environment is too dark
Microphone: Collects audio

Back View



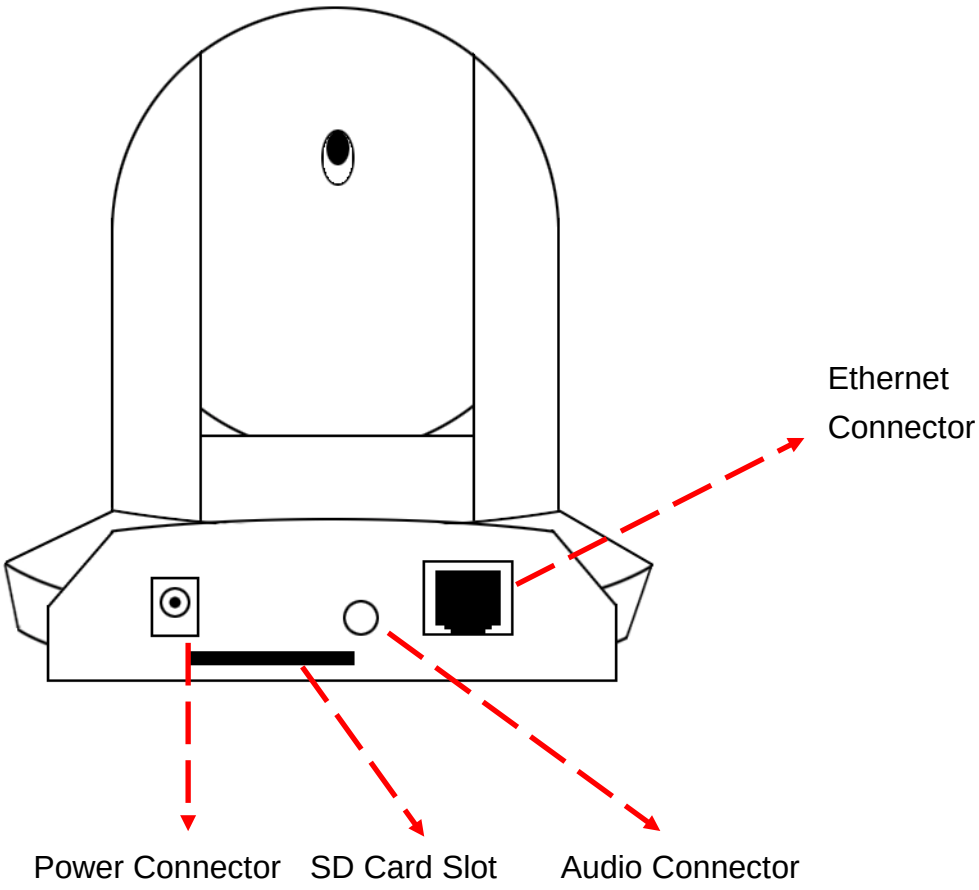
Antenna Base: Connects to supplied antenna
Power Connector: Connects to 12V DC power adapter
SD Card Slot: Accepts SD / SD-HC memory card for image / video storage
WPS Button: click the buttom on IP Cam and click it on the AP you want to connect for wireless
Audio Connector: Connects to external speaker for audio output
Ethernet Connector: Connect to your local area network

Back View of Wired model



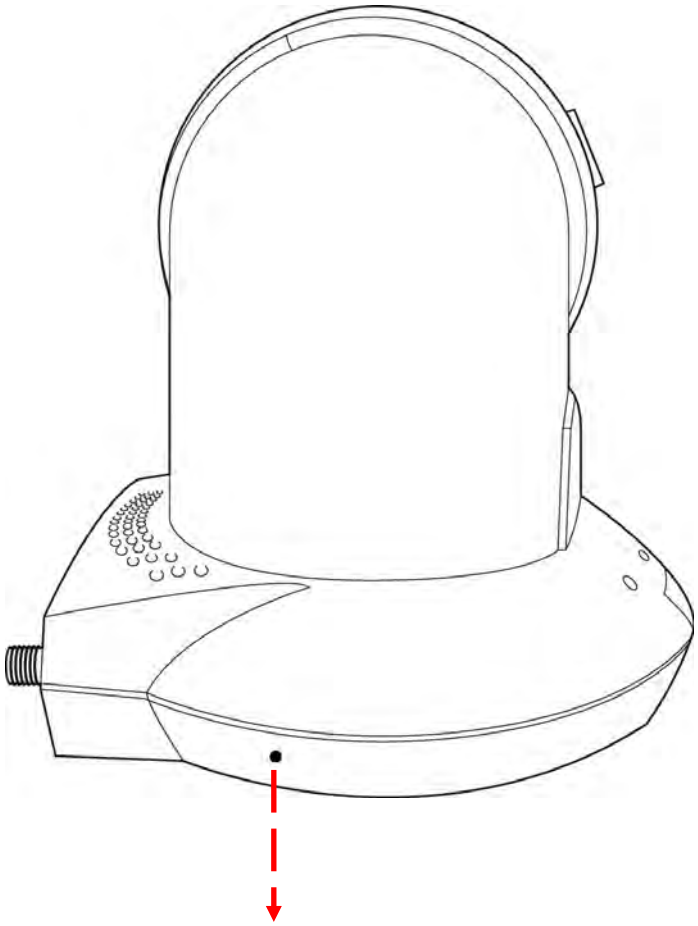
Power Connector: Connects to 12V DC power adapter
SD Card Slot: Accepts SD / SD-HC memory card for image / video storage
USB Port: Connects to certain wireless module.
Audio Connector: Connects to external speaker for audio output
Ethernet Connector: Connect to your local area network

Back View of POE model



Power Connector: Connects to 12V DC power adapter
SD Card Slot: Accepts SD / SD-HC memory card for image / video storage
Audio Connector: Connects to external speaker for audio output
Ethernet Connector: Connect to your local area network

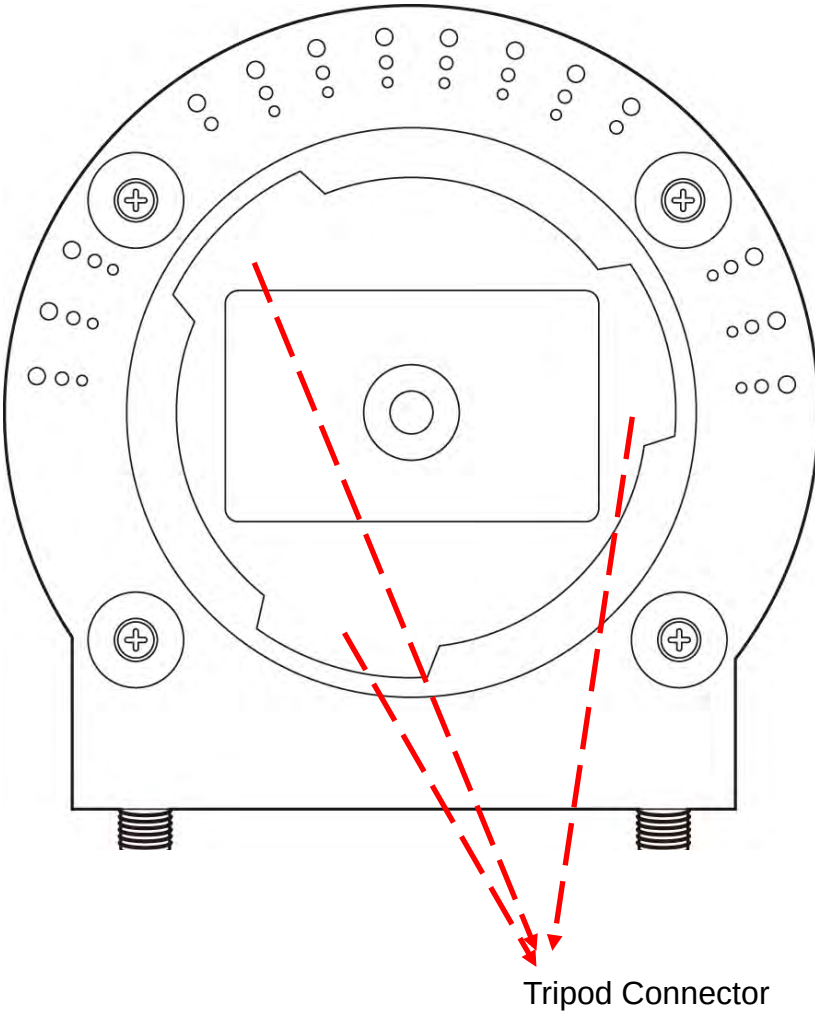
Side View



Reset Button

Reset Button: Press the button with pen nib and hold for 5 seconds to reset the camera settings to factory default value.

Bottom View



Tripod Connector: Connects to tripod to secure the camera when the camera is not put on a horizontal surface.

1.5 Descriptions for LED Indicators

Wired and Wireless model

LED Name	Status	Description
Power	Off	Camera is not powered (camera off)
	On	Camera is correctly powered (camera on)
LAN	Off	LAN port not in use
	On	LAN port in use
	Flash	Transferring data via LAN port
WLAN	Off	Wireless LAN not in use
	On	Wireless LAN in use
	Flash at low speed	Waiting for WPS connection from AP and flash speed is once a second.
	Flash	Transferring data via wireless LAN
Audio	Off	Audio function is disabled (Volume 0)
	On	Audio function is enabled
	Flash	Two way audio is working

POE model

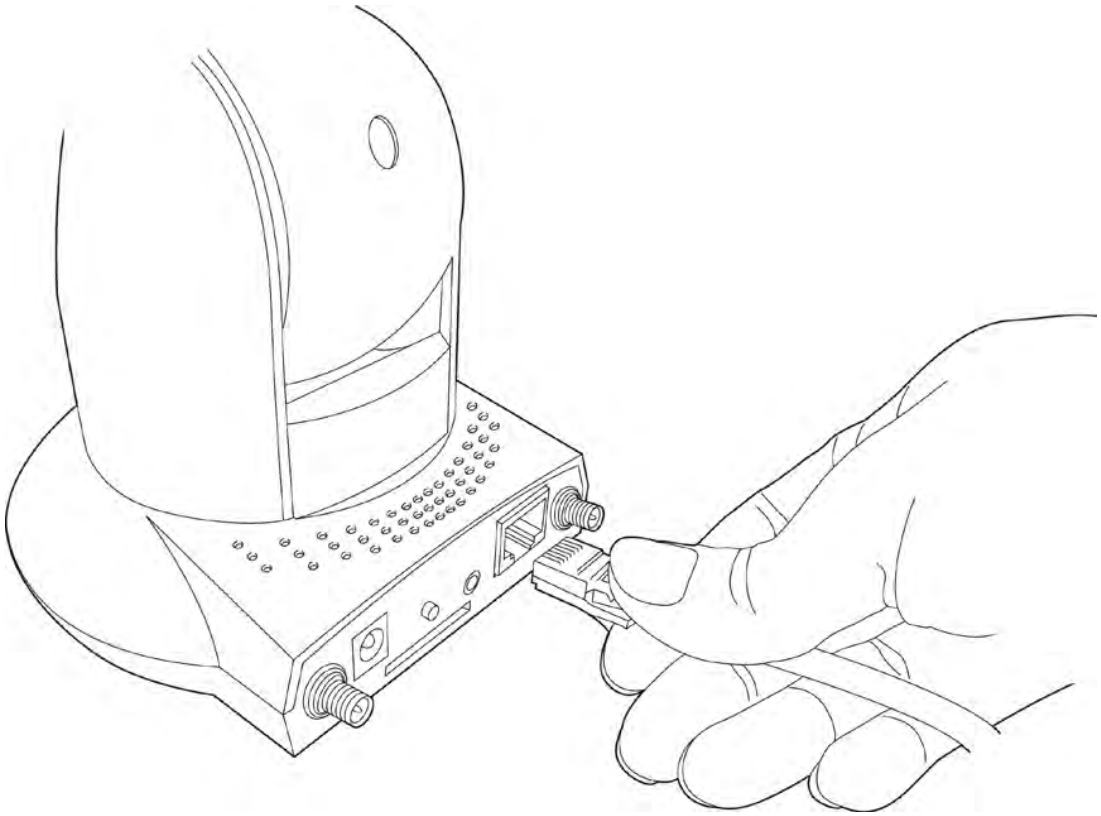
LED Name	Status	Description
Power	Off	Camera is not powered (camera off)
	On	Camera is correctly powered (camera on)
ACT	Off	No data is transferred
	On	Transferring data
LAN	Off	LAN port not in use
	On	LAN port in use
Audio	Off	Audio function is disabled (Volume 0)
	On	Audio function is enabled
	Flash	Two way audio is working

1.6 Camera Installation

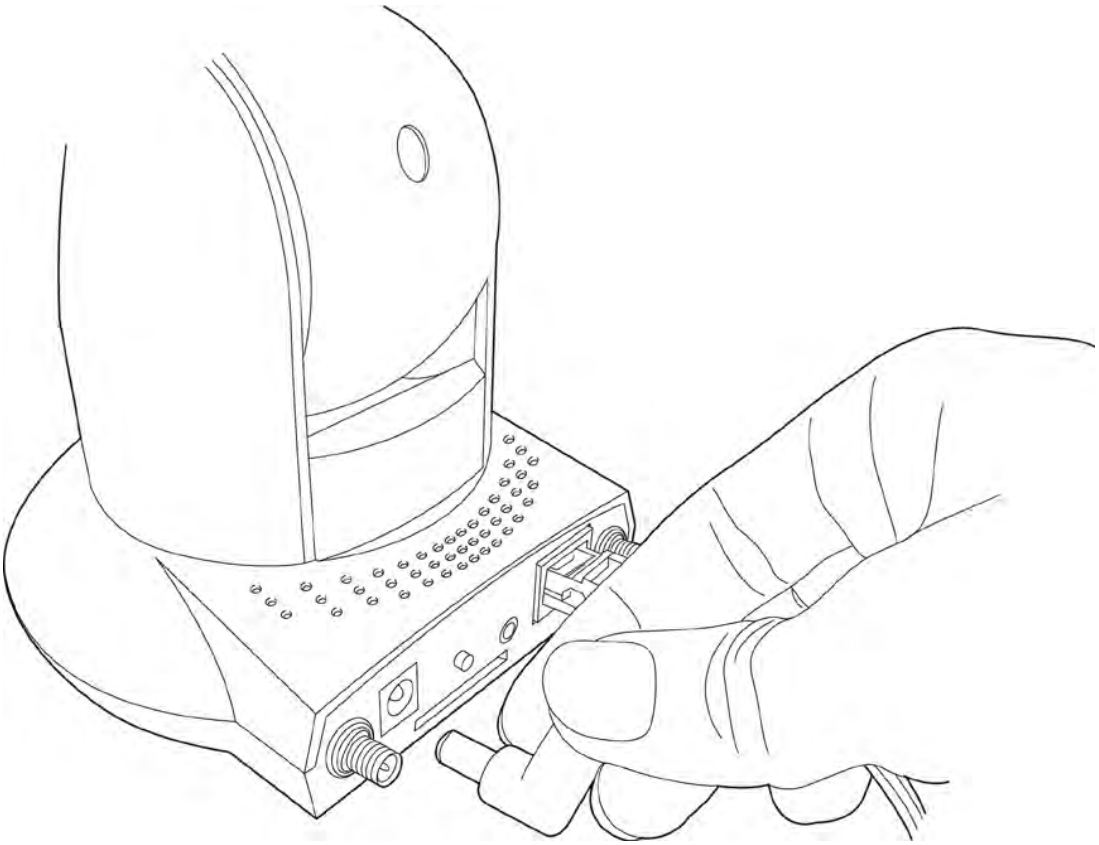
Please follow the following instructions to set your IP camera up.

1. Unpack the product package and check if anything's missing.

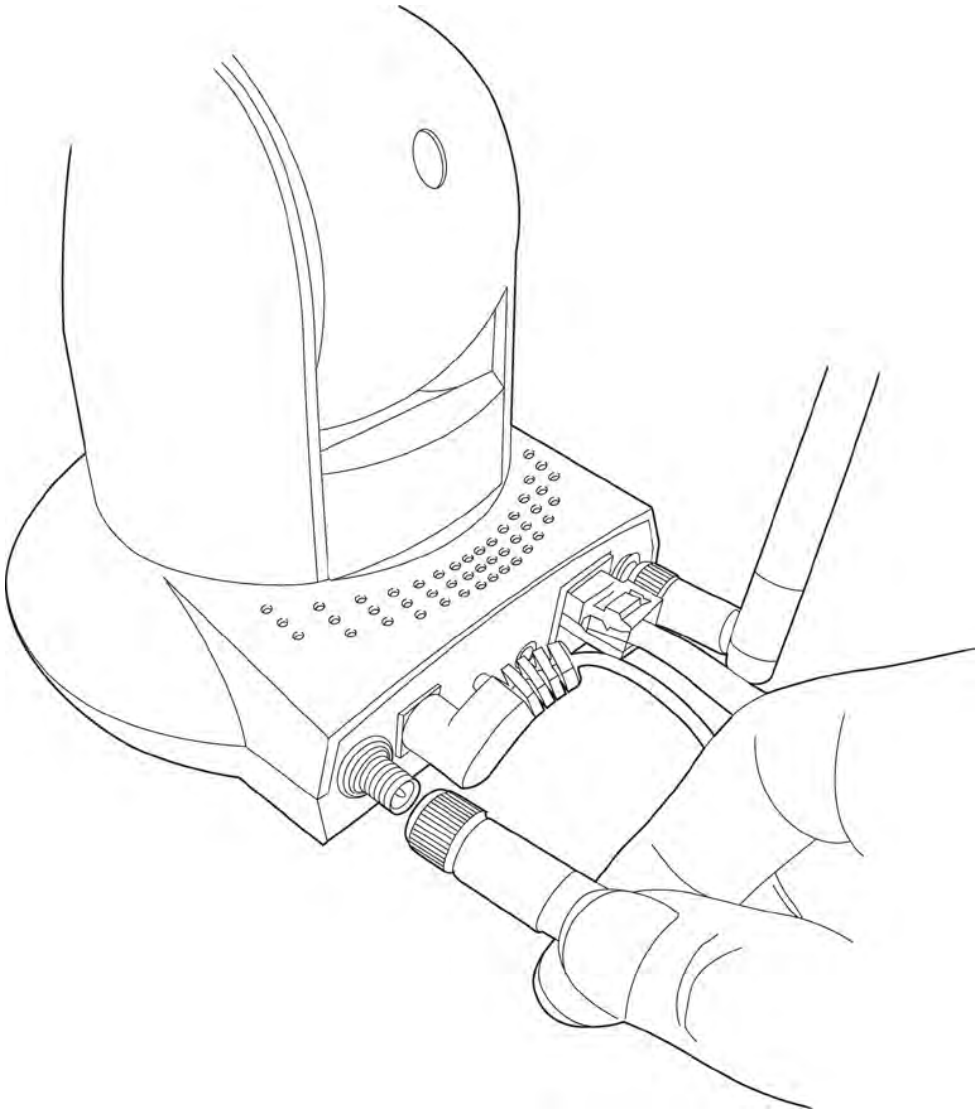
2. Connect the Ethernet cable to your local area network, and connect the other end to the LAN jack of this IP camera.
   ***NOTE**: You can skip this step if you plan to use wireless LAN only.*



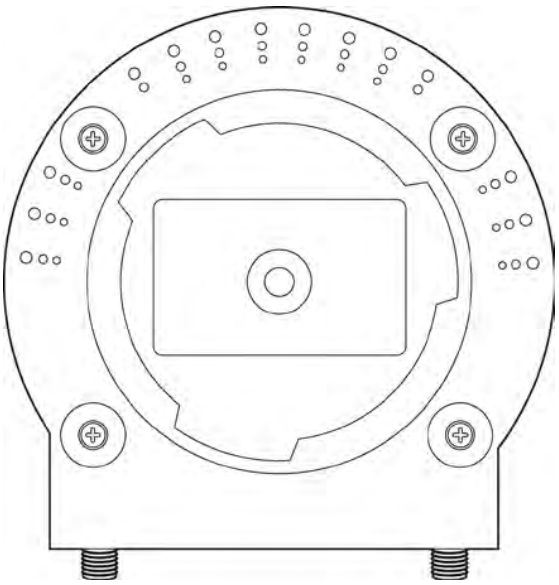
3. Plug the power adapter to wall socket, and connect the power connector to the power jack located at the bottom of the IP camera.



4. Connect two antennas to the antenna bases, which is located at the back of this IP camera.



5. Place the camera at a secure place, and point the camera to the place you wish to monitor. If you wish to hang the camera on the ceiling or wall, please use the tripod connector (located at the bottom of the camera) to secure the camera.



6. Launch Internet Explorer on your computer, and following the instructions given in next section to set the IP camera.

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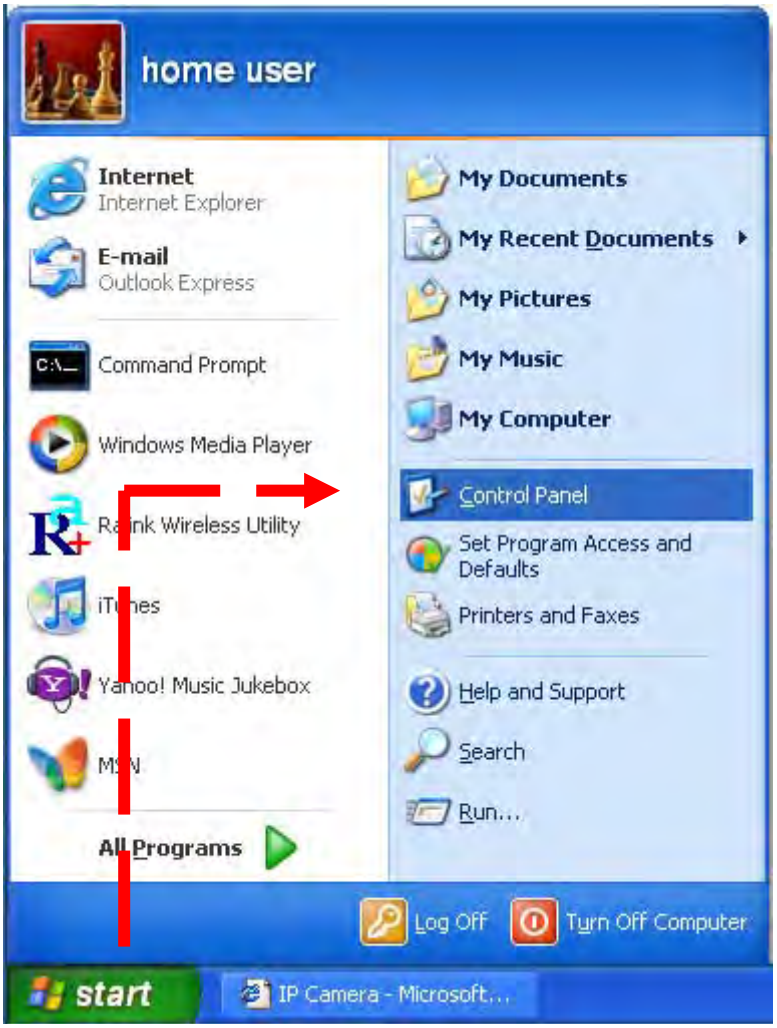
1.7 Locate the IP Address of this IP Camera

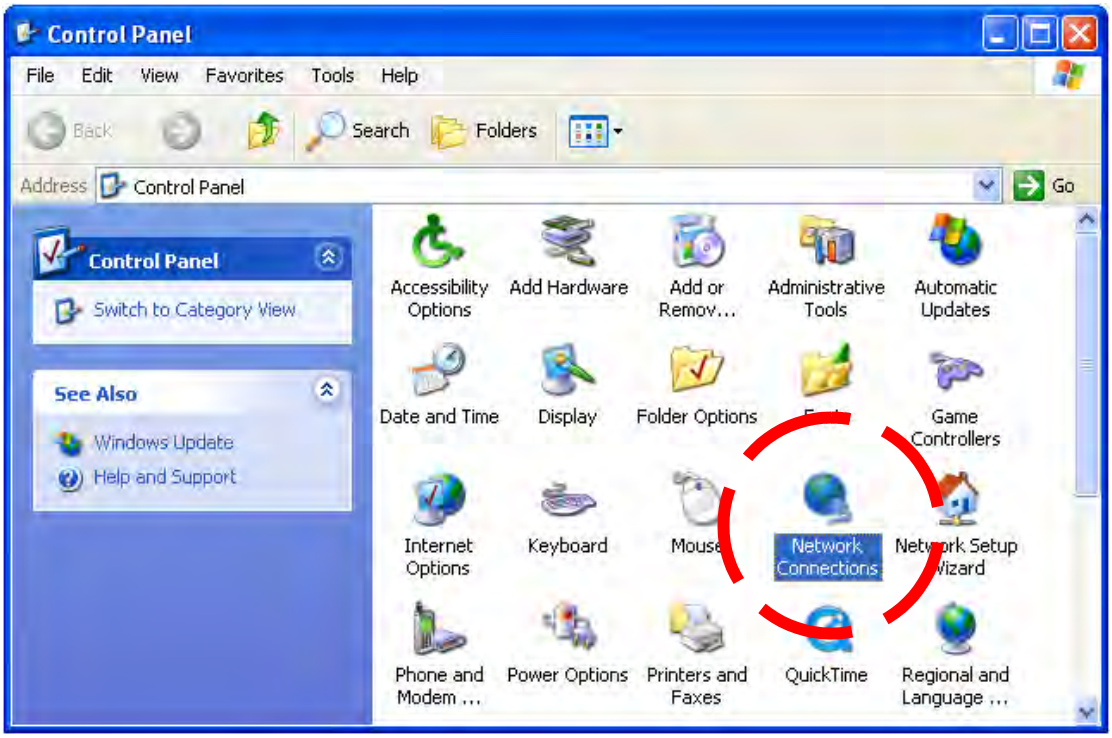
Default IP address of this IP camera is 192.168.2.3. If you wish to assign another IP address to this IP camera, you have to log onto the web configuration interface of the camera first.

If the left three fields of the IP address of your computer is not 192.168.2, you'll have to change the IP address of your computer first:

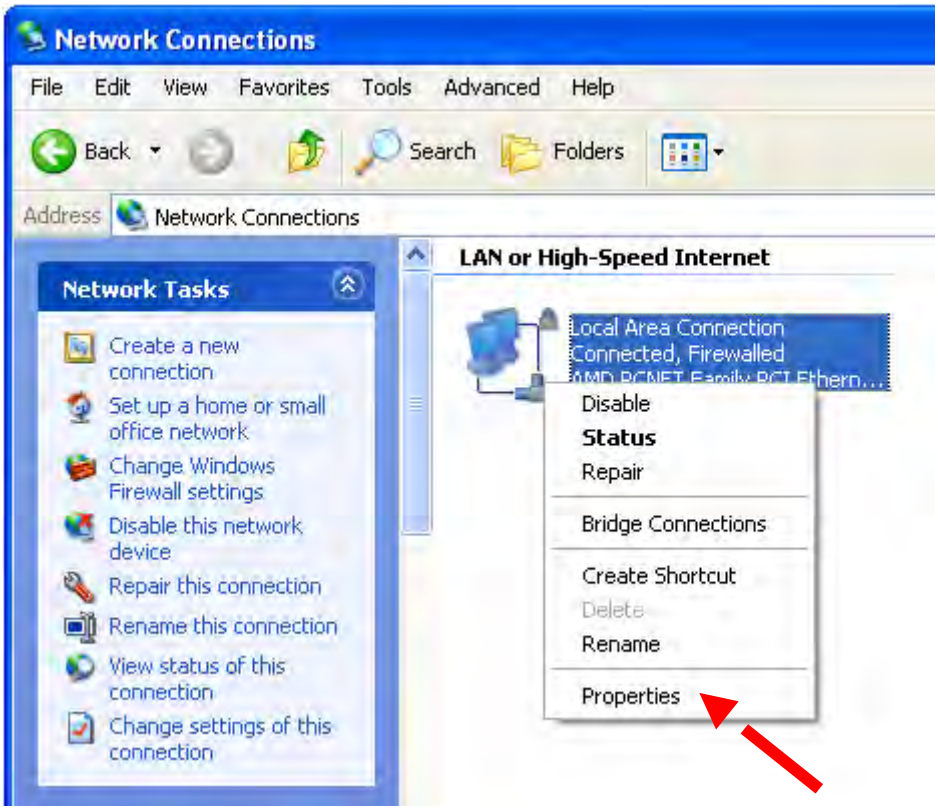
1. Click 'Start' -> 'Control Panel'



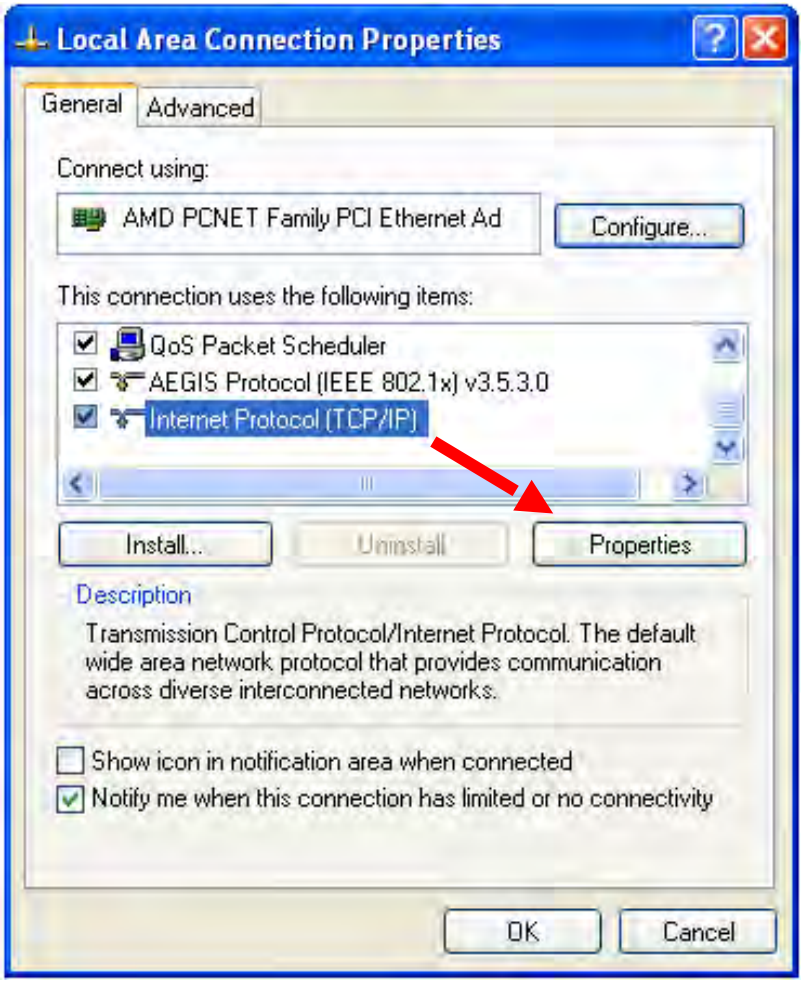
2. Double-click ‘Network Connections’ icon.



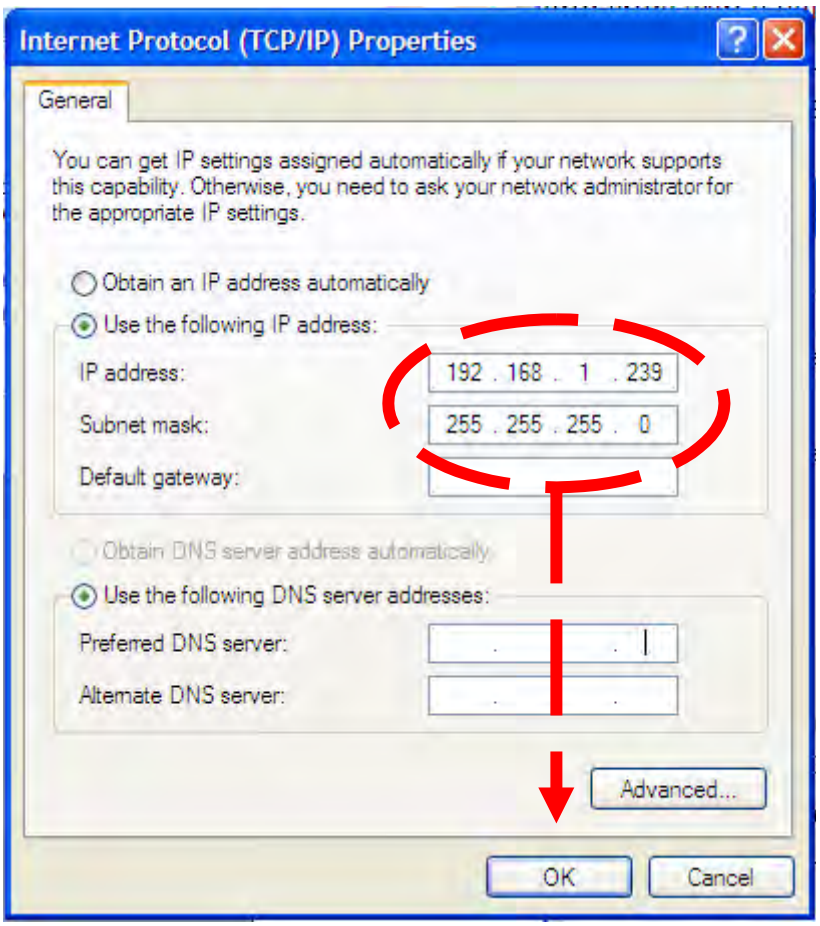
3. Right-click ‘Local Area Connection’, and click ‘Properties’.



4. Select ‘Internet Protocol (TCP/IP)’, then click ‘Properties’.



5. In ‘IP address’ field, please fill in any IP address begins with ‘192.168.1’, and ends with a value greater than 2 and less than 254 (You can use the example in the picture ‘192.168.1.339’). In Subnet mask field, please fill ‘255.255.255.0’. Please keep all other fields empty, and click ‘OK’.



If you changed the IP address of this IP camera and you forget it, there’re 2 methods to recover it:

a. Press and hold the ‘Reset’ button located at the bottom of this IP camera, to clear all settings of the IP camera and reset the IP address back to 192.168.1.2. You’ll lose all settings in the IP camera.

b. Ask network administrator to check the DHCP release table, if the camera was set to obtain the IP address by DHCP, a new record will be added to DHCP release table on DHCP server when the IP camera is connected to the local area network.

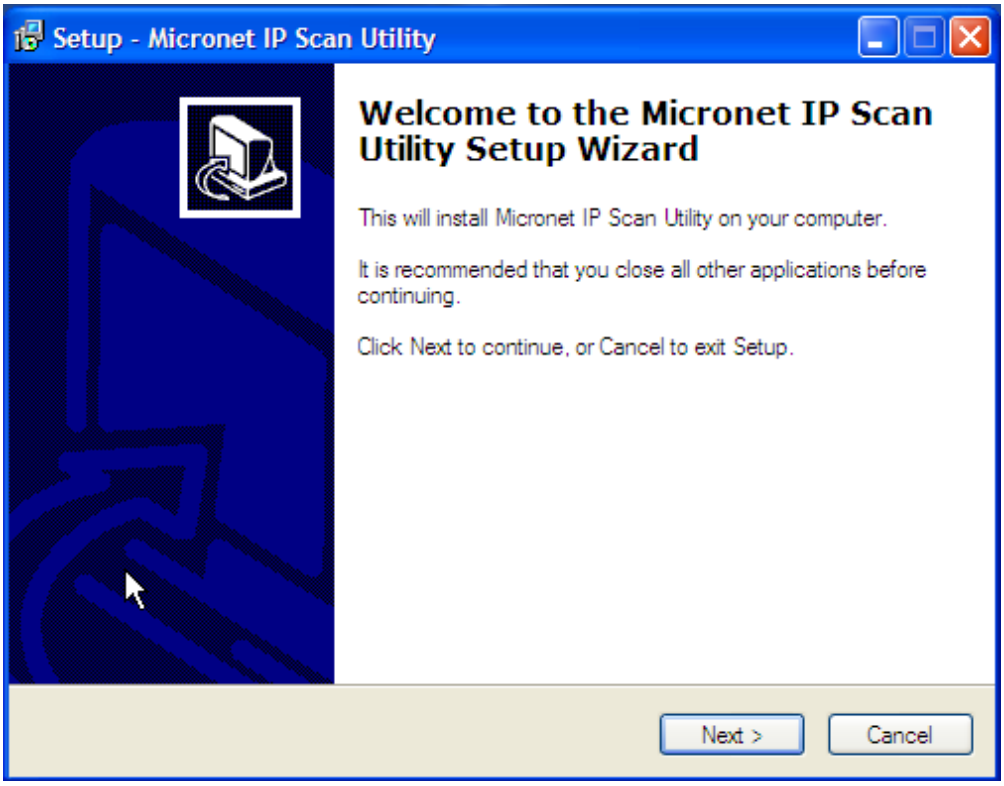
1.8 Using Camera Admin Software to Locate Camera

If you can't connect to the camera by the instructions given in last chapter, you can use camera admin software to search the camera which is connected to your local area network. The admin software is also capable to locate multiple cameras on your local area network.

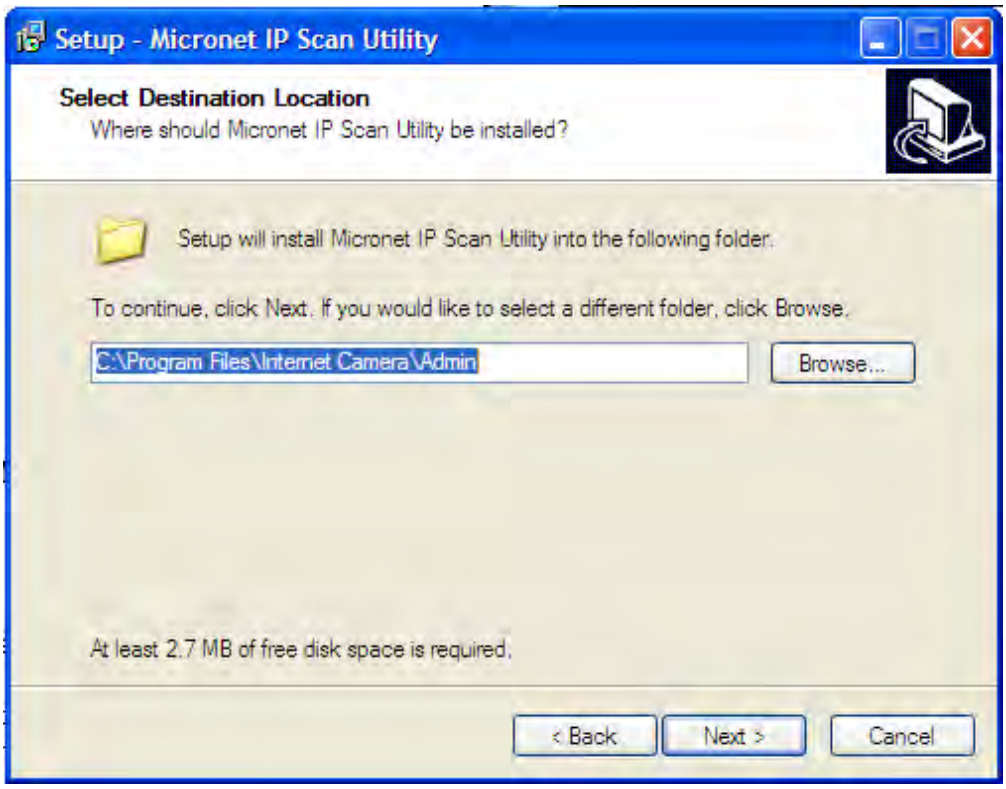
Please insert the user manual CD-ROM supplied in the product package, and the CD will automatically running the installation, if not please double-click 'Micronet IP Scan Utility:

The following installation steps are the demonstration of "Micronet IP Scan Utility"

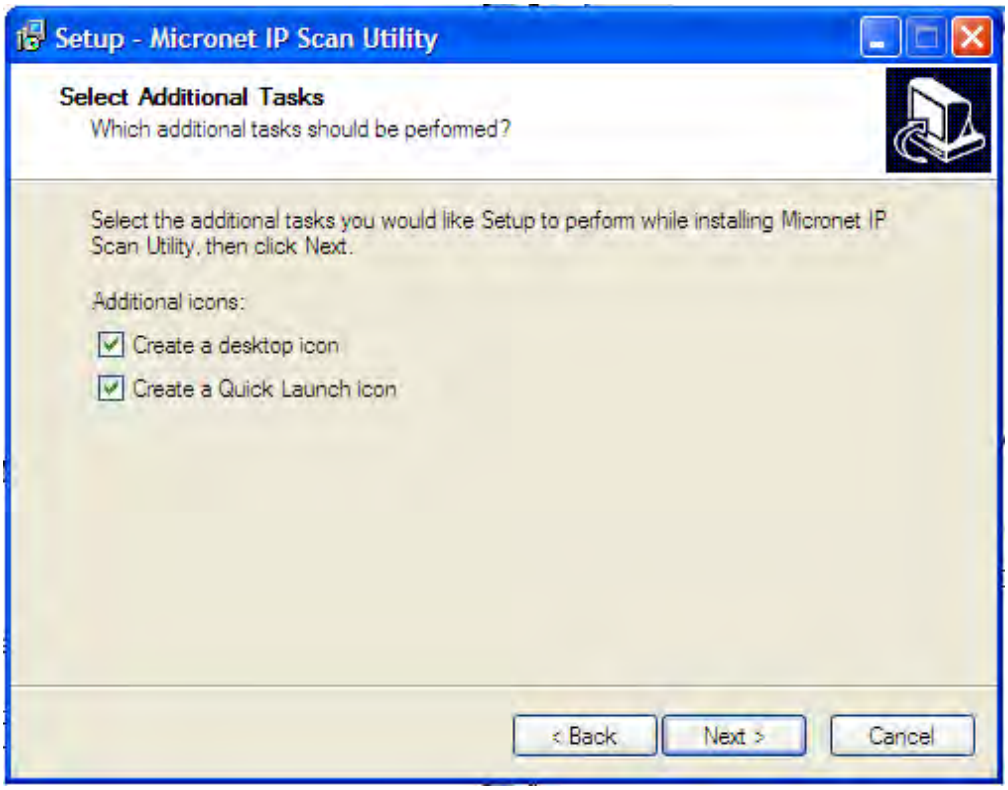
1. Click ‘Next’ to start install camera admin software:



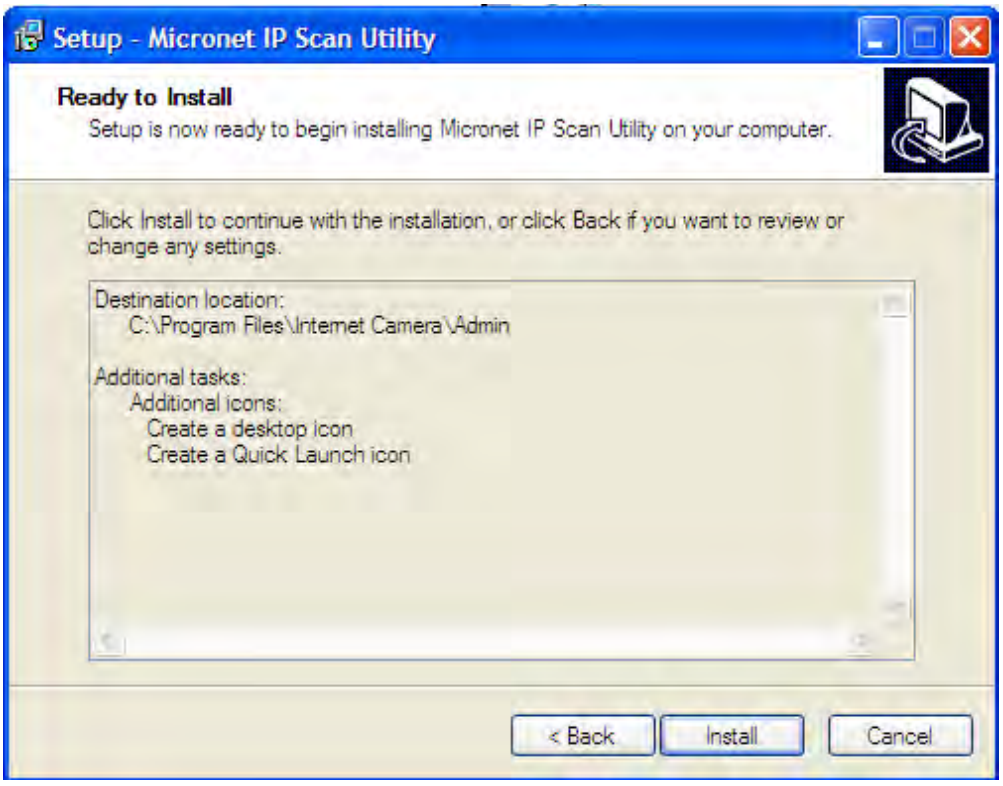
2. You can change the installation folder of camera setup software here, click ‘Browse’ to select an existing folder, or you can just click ‘Next’ to use default installation folder:



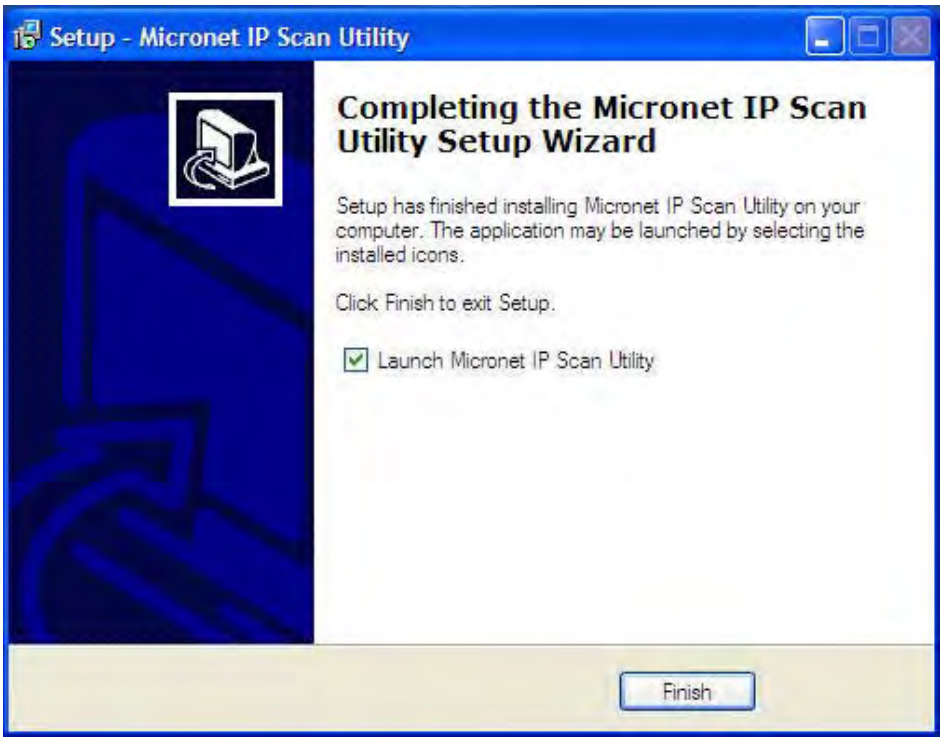
3. If you wish to create desktop icon and / or quick launch icon for camera admin software, please check corresponding box, and click ‘Next’ to continue.



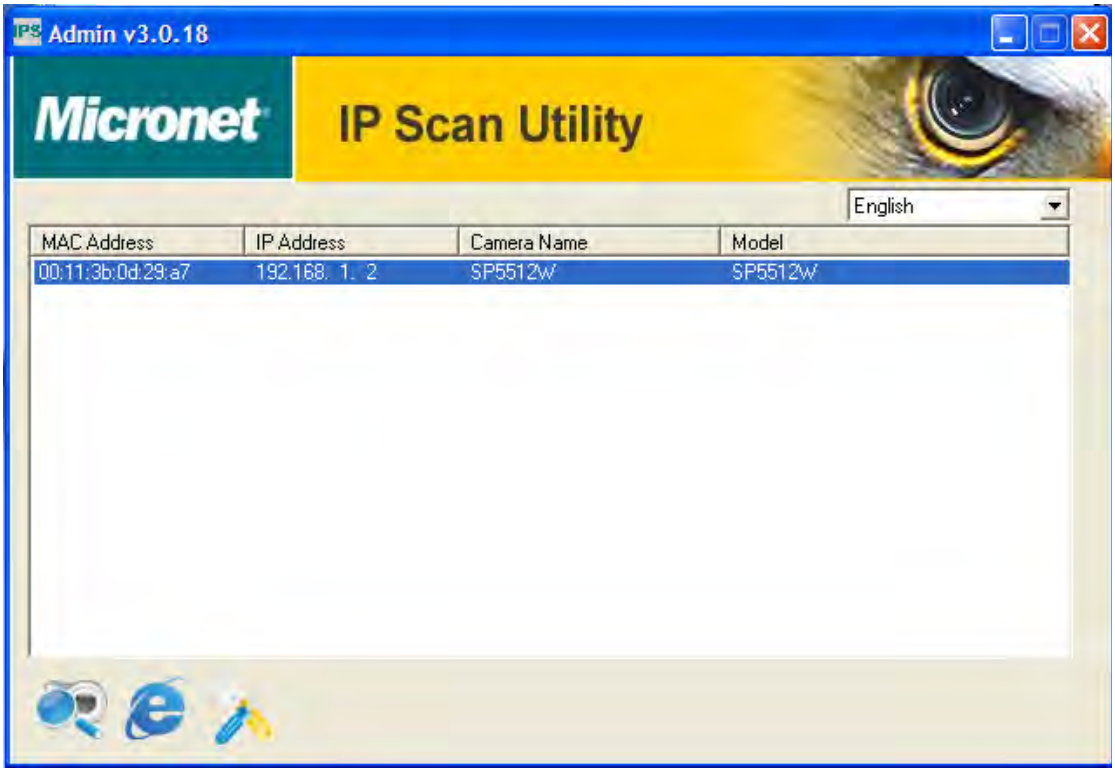
4. You’ll see a brief of all options you selected, click ‘Install’ to install camera admin software now, or click ‘back’ to back to previous steps to change settings.



5. When you see this message, the installation of camera admin software is complete. If you wish to launch camera admin software now, keep ‘Launch IP Cam Admin Utility’ box checked, and click ‘Finish’ to close installation utility.



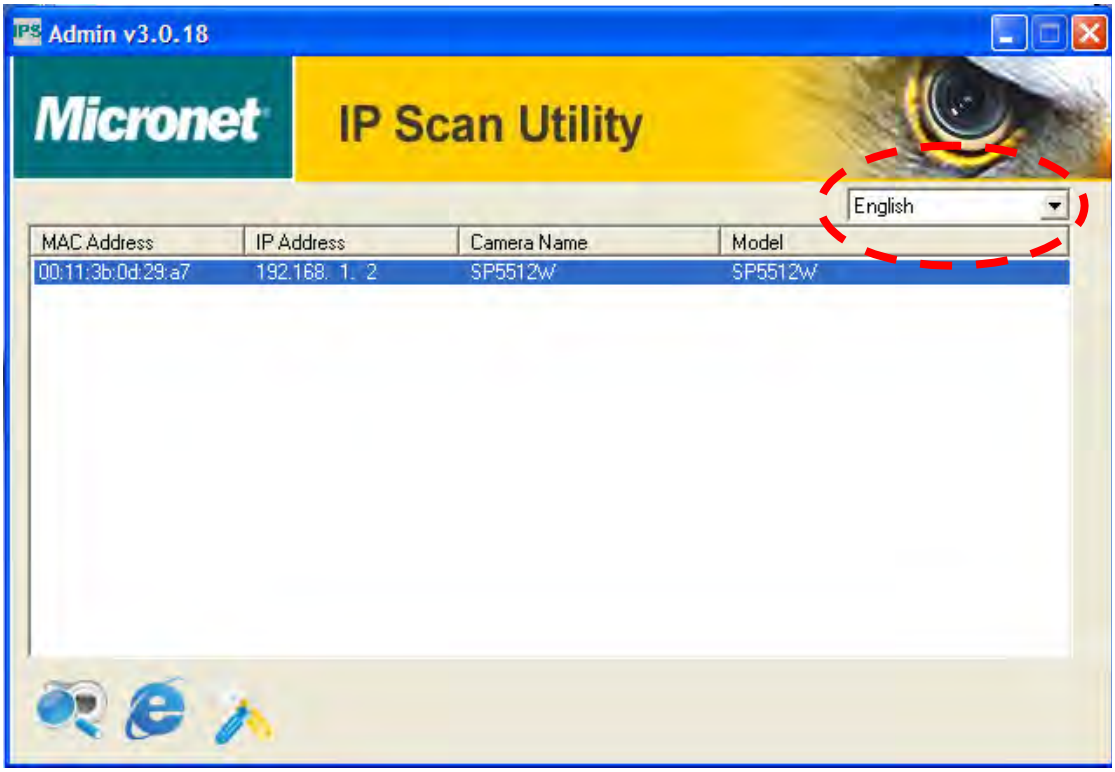
After the camera admin software is launched, all cameras found on your local area network will be displayed:



All camera-related information will be displayed here. If you wish to connect to certain camera by web browser, double-click the camera listed here.

The camera admin software also provides several functions:

Language change: This camera admin software supports 3 languages: English, Chinese, and Japanese. You can select the language you wish to use from language dropdown menu located at upper-right corner of camera admin software.



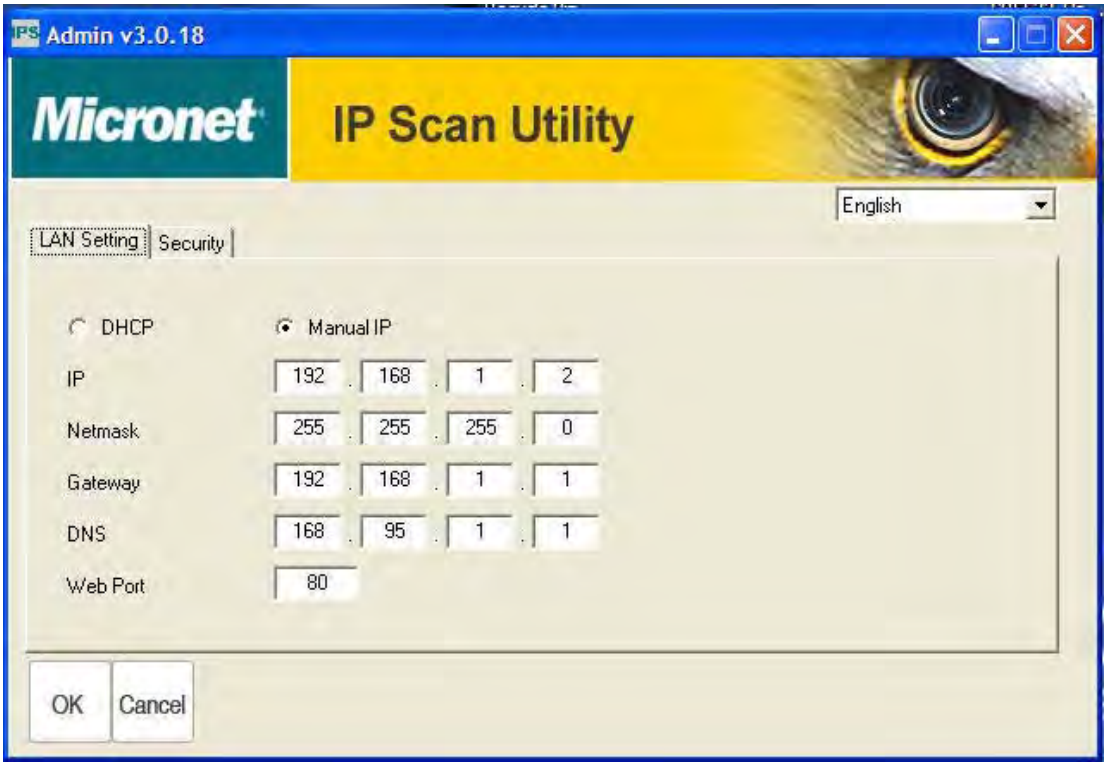
 Search camera: Click this button to search all cameras on local area network again.

 Browse camera via web: Select a camera listed above first, and then click this button to connect to the camera by web browser.

 Configure camera: Click this button to configure camera's network

and security setting. You'll be prompted to input camera's password:

Input default password ***pass*** and click OK to configure the camera's network and security setting:

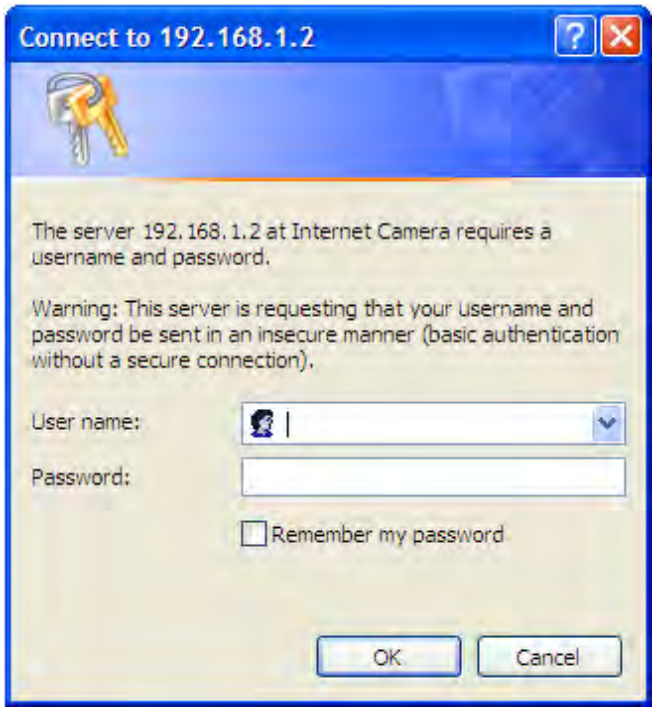


In 'Lan Setting' page, you can configure camera's network settings. Select 'DHCP' to set the camera to obtain an IP address from DHCP server on local area network automatically, and select 'Manual IP' to input the IP address information manually. Click 'OK' to save settings.

In ‘Security’ page, you can change the camera’s name and password (user name is always ‘admin’ and cannot be changed). You have to input the same password in both ‘New Password’ and ‘Confirm Password’ field, or you’ll be prompted to input new password again. Click ‘OK’ to save settings or click ‘Cancel’ to discard changes.

1.9 Log Onto Web Management Interface

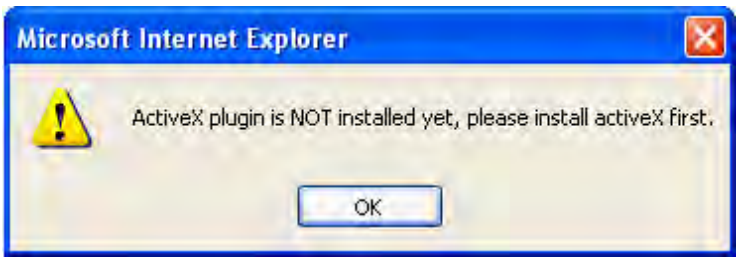
Make sure the IP camera is correctly powered (Power LED is on), and then launch Internet Explorer and type the IP address of the IP camera in address bar of Internet Explorer. You should be prompted to input the user name and password:



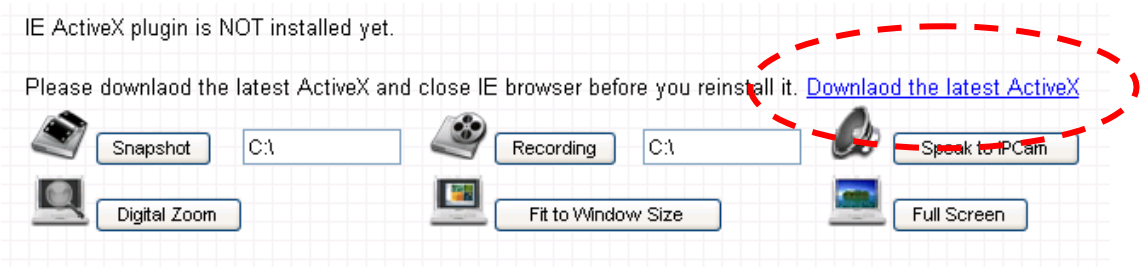
Default user name is '***root***' and password is '***pass***'. Click 'OK' to continue after user name and password has entered.

If you're rejected, maybe the password has been modified previously. This should not happen if this is a newly-purchased camera, however, if you get the camera from someone else, the password would be changed. Please try to obtain the correct user name / password, or you'll have to reset the camera.

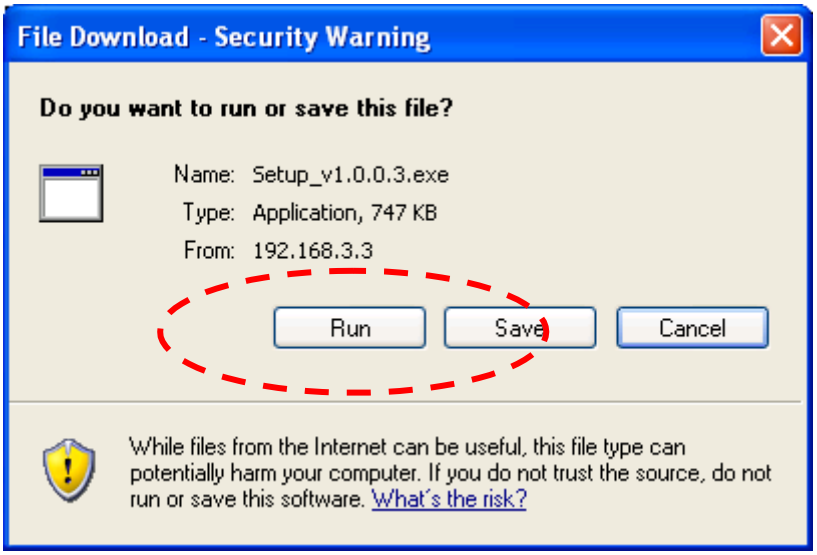
If this is the first time you log onto web management interface, you'll be prompted to install ActiveX Plugin:



When you see this message, please click 'OK', and click 'Download the latest ActiveX' link to download plugin so you can use this camera:

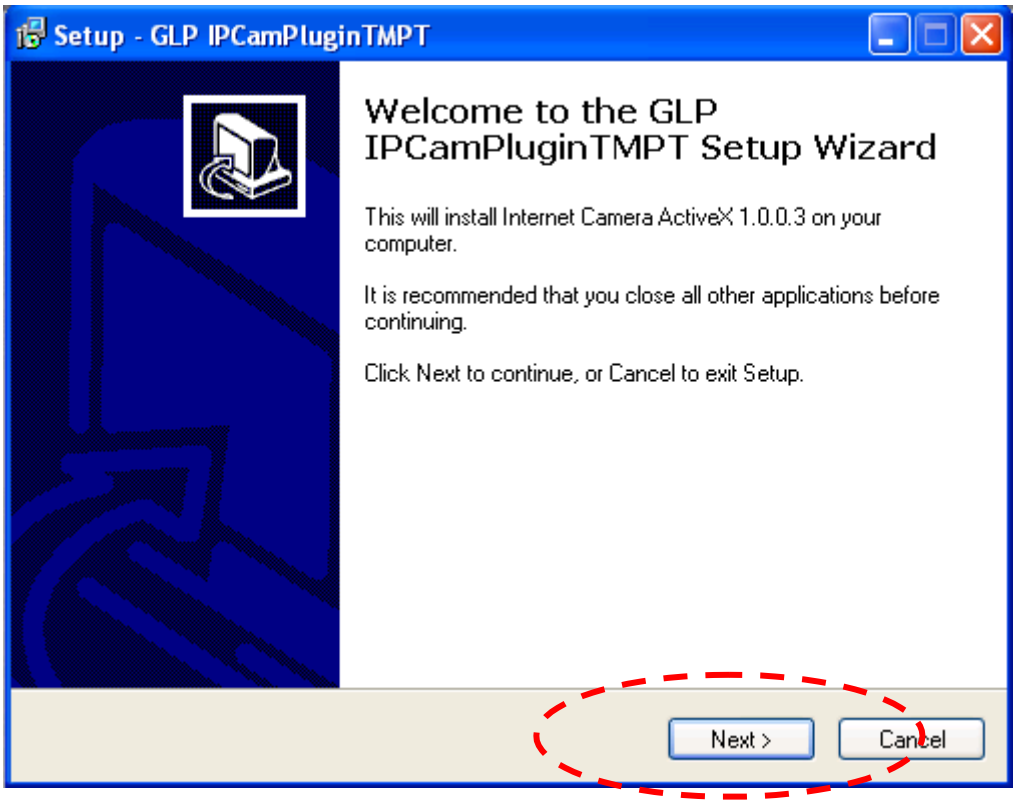


Click 'Run' to download plugin:

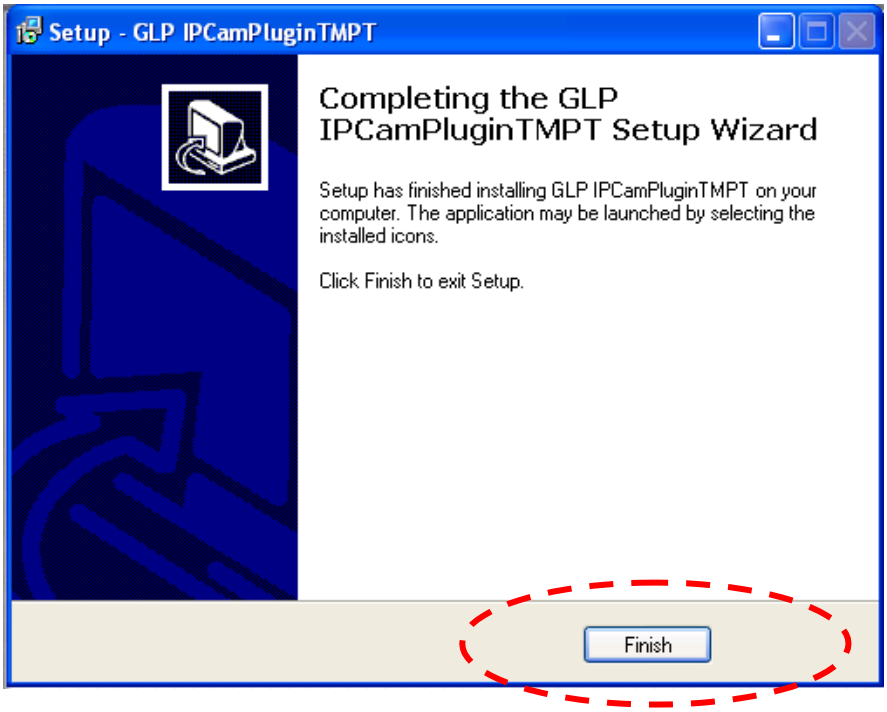


Click ‘Run’ to install plugin:

Please click ‘Next’ button to start installation (click ‘Next’ or ‘Install’ when you’re prompted, until installation is complete).

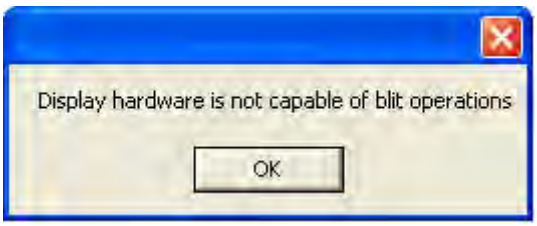


Click ‘Finish’ to complete plugin installation.



Now you can go back to web browser, and you should be able to see the image captured by camera (You may need to press F5 or CTRL-R to reload web page).

Note: If you see one of these messages (or both):



OR

Your computer may not have the display capability that this IP camera requires, or you don't have Microsoft DirectX® installed. Please download Microsoft DirectX® from Microsoft's website (http://www.microsoft.com), and try again.

In some cases, your computer is able to display the image from IP camera correctly, but you'll still see these messages. If this happens, just ignore them.

Special notes:

Because this IP camera has IR coating on its lens, plants will appear as white because of photosynthesis effect, ***THIS IS NOT MALFUNTION.***

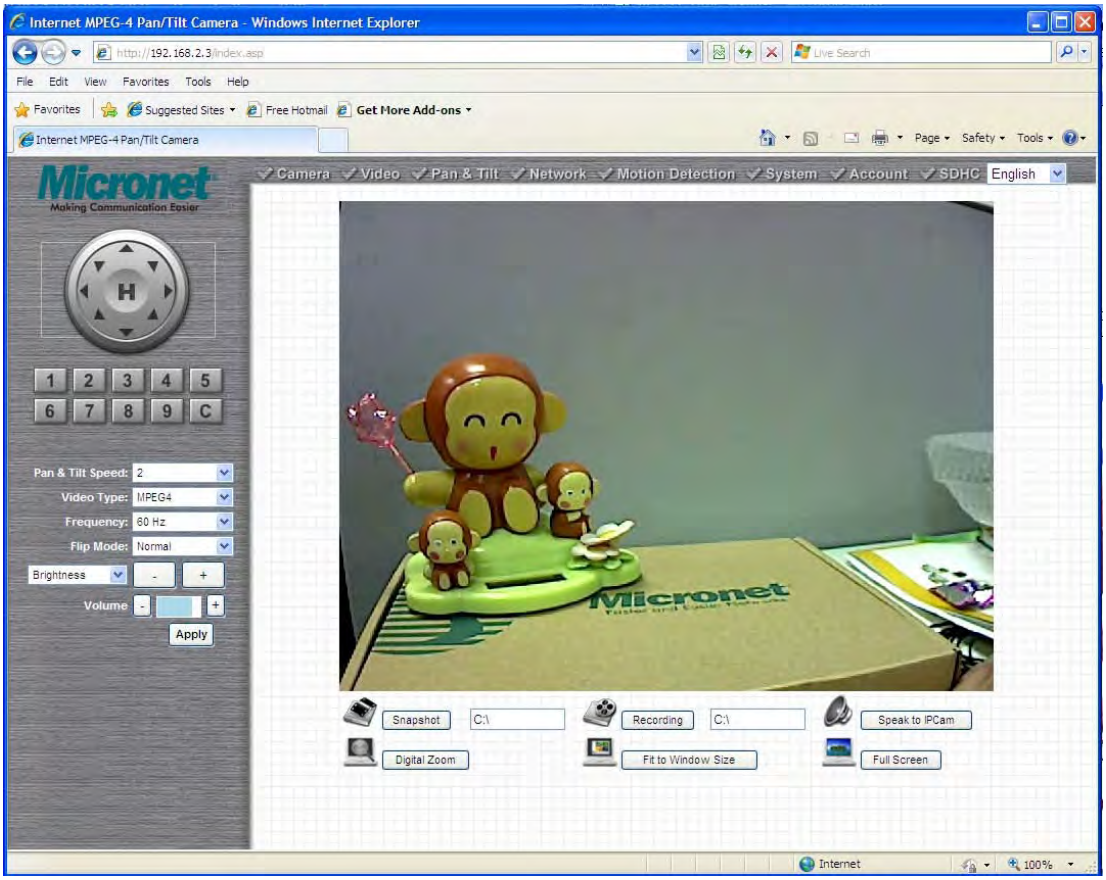
Trees seen by human's naked eyes:

Trees seen through this IP camera:

Chapter II: Using Web Management Interface

2.1 Camera Settings

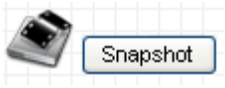
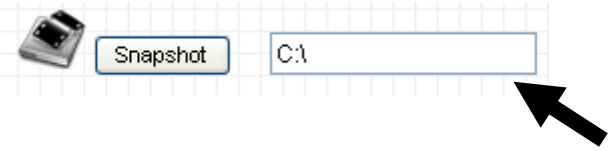
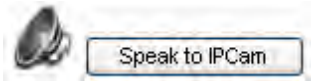
The first menu after you logged onto web management interface is ‘Camera’, and this is the only menu you can see the real-time image from camera.

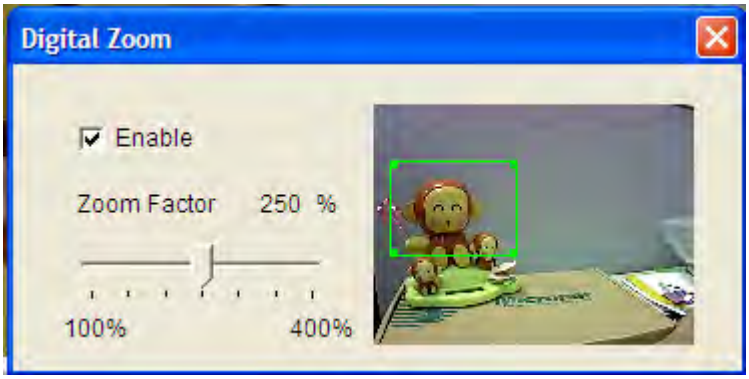
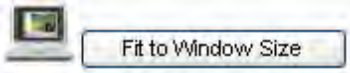
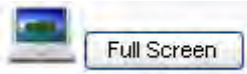


You can always back to this menu by clicking ‘Camera’ on the top of web management interface.

The descriptions of every setting in this menu will be given below:

Item	Description
Pan/Tilt Speed	Specifies the moving speed when you use pan / tilt function to point the camera to a new direction. Available options are 1 (fastest) to 5 (slowest). Select 1 to move the camera by a faster speed, but you will not be able to control the movement precisely. If you wan to move the camera in a more accurate manner, select a slower speed.
Video Type	Specifies video encoding type. Available options are ‘MPEG4’, ‘MJPEG’, and ‘H.264’. Different encoding type requires different bandwidth, and provides different video quality.
Frequency	If the place where this IP camera points to has a (or more) fluorescent light(s), the image may look flashing. In this case, you can adjust this setting to the frequency of electrical power; this can improve the image quality effectively. If you don’t know which one you should use, just try any of them and select one with less flicker.
Flip Mode	If you’re not putting this camera on a horizontal surface but hang the camera on the ceiling or wall, you can use this function to rotate the displaying image.
Brightness / Saturation / Sharpness	Select brightness, saturation, and sharpness from dropdown menu, and click ‘ - ' or ‘ + ‘ button to increase or decrease brightness / saturation / sharpness setting value. In certain environment, adjust brightness, saturation, and / or sharpness will help improve video quality.
Volume	Adjust the volume of audio output. Press ‘+’ or ‘-‘ button to increase or decrease volume.
NOTE: When you change any setting(s) listed above, please click ‘Apply’ button so the change(s) will take effect. For following functions, changes will take effect right away.	

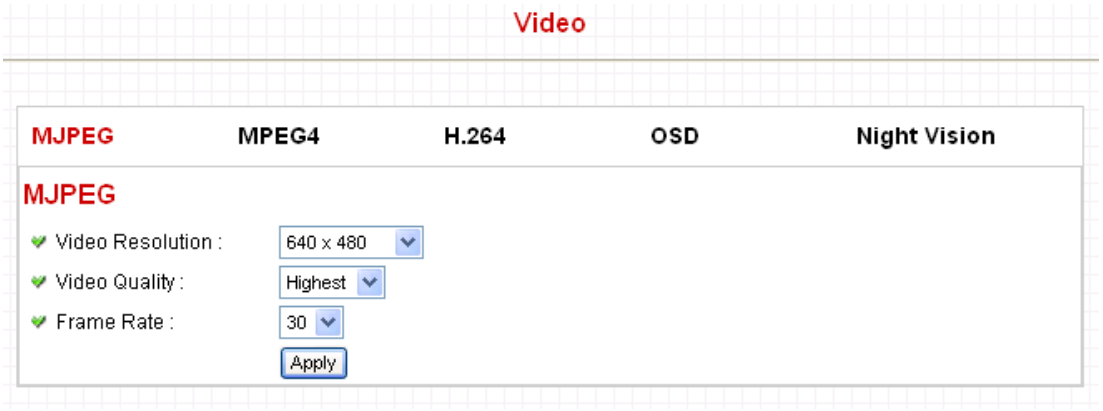
Pan / Tilt Control 	Moves camera to a new direction. Press one of 8 directional buttons to move the camera, and press 'H' to move the camera back to 'home' (original) position.
Preset Points 	You can set up to 9 preset points of camera position; press the number to move the camera to preset point instantly. See next chapter for detail instructions of how to set preset points. Press 'C' and the camera will cruise between all preset points automatically.
Snapshot 	Click 'Snapshot' button to save the displaying image as an image file, a message box will appear after you click 'Snapshot' button, showing the filename and location of saved image file (default filename is current date and time). Default directory used to save image file is 'C:\', you can change the directory by clicking the text input box located at the right of 'Snapshot' button:  and you'll be prompted to select a new directory.
Recording 	Press this button to record the displaying image as a video file in AVI format, and you can play the video file back by Windows Media Player. To stop recording, press 'Stop Recording' button (the same button). You can also change the directory used to save video file.
Speak to IP Cam 	You can transmit the voice received by your computer's microphone to the camera's external speaker. Press and hold this button, then speak to the microphone. Please note that external speaker must be connected to this camera.
Digital Zoom	If you wish to enlarge certain portion of the captured

	image, you can click this button to set digital zoom:  Click 'Enable' to enable digital zoom function, then you can drag the slide bar to adjust zoom ratio. You can also use your mouse to drag the zoom area (the green square) to reposition the zoom area.
Fit to Window Size 	Click this button and the image size will be adjusted to fit the size of browser window.
Full Screen 	Click this button to display the image in full-screen mode (uses all available space to display the image captured by this camera).

2.2 Video

You can change video-related settings of this IP camera in ‘Video’ menu. You can access this menu by clicking ‘Video’ on the top of web management interface.

There are 5 types of video settings for this IP camera. To set the option of a certain video setting, put mouse cursor on it and its options will appear.



2.2.1 MJPEG

You can adjust video settings when you select ‘MJPEG’ as video type in ‘Camera’ menu.

The descriptions of every setting in this menu will be given below:

Item	Description
Video Resolution	Changes the resolution of video. Available options are 1280 x 1024, 640 x 480, and 320 x 240. Higher resolution provides better video quality and more detail, but requires more network bandwidth.
Video Quality	Changes video quality. There are 5 levels of video quality from ‘Lowest’ to ‘Highest’. Selecting a higher video quality will provide better video quality, but requires more network bandwidth.
Frame Rate	Changes video frame rate. Available options from ‘30’ to ‘1’, indicates how many video frames this camera will transmit every second. Higher frame rate provides smooth video watching experience and will not lose details of video, but requires more network bandwidth. If you’re using this video camera with insufficient network bandwidth, selecting a lower frame rate setting will help.

Click ‘Apply’ for settings to take effect.

2.2.2 MPEG4

You can adjust video settings when you select ‘MPEG4’ as video type in ‘Camera’ menu.

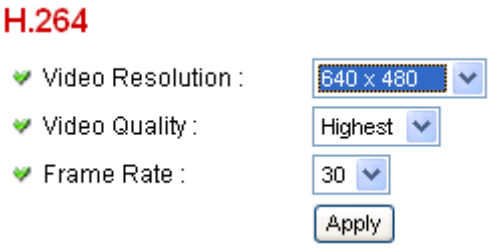
The descriptions of every setting in this menu will be given below:

Item	Description
Video Resolution	Changes the resolution of video. Available options are 1024 x 768, 640 x 480, and 320 x 240. Higher resolution provides better video quality and more detail, but requires more network bandwidth.
Video Quality	Changes video quality. There are 5 levels of video quality from ‘Lowest’ to ‘Highest’. Selecting a higher video quality will provide better video quality, but requires more network bandwidth.
Frame Rate	Changes video frame rate. Available options from ‘30’ to ‘1’, indicates how many video frames this camera will transmit every second. Higher frame rate provides smooth video watching experience and will not lose details of video, but requires more network bandwidth. If you’re using this video camera with insufficient network bandwidth, selecting a lower frame rate setting will help.

Click ‘Apply’ for settings to take effect.

2.2.3 H.264

You can adjust video settings when you select ‘H.264’ as video type in ‘Camera’ menu.



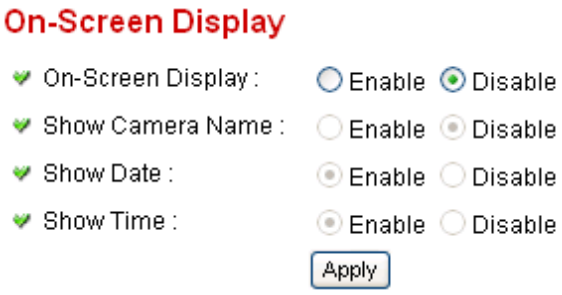
The descriptions of every setting in this menu will be given below:

Item	Description
Video Resolution	Changes the resolution of video. Available options are 1280 x 1024, 640 x 480, and 320 x 240. Higher resolution provides better video quality and more detail, but requires more network bandwidth.
Video Quality	Changes video quality. There are 5 levels of video quality from ‘Lowest’ to ‘Highest’. Selecting a higher video quality will provide better video quality, but requires more network bandwidth.
Frame Rate	Changes video frame rate. Available options from ‘30’ to ‘1’, indicates how many video frames this camera will transmit every second. Higher frame rate provides smooth video watching experience and will not lose details of video, but requires more network bandwidth. If you’re using this video camera with insufficient network bandwidth, selecting a lower frame rate setting will help.

Click ‘Apply’ for settings to take effect.

2.2.4 OSD

If you need to display information about this camera, like camera's name or current date / time, you can use OSD (On-Screen Display) menu:



The descriptions of every setting in this menu will be given below:

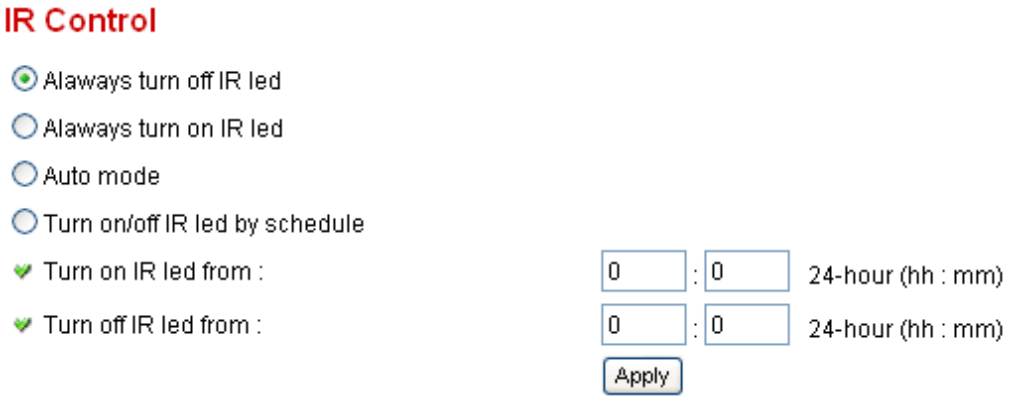
Item	Description
On-Screen Display	Select 'Enable' to enable on-screen display function (information about this camera will be displayed on camera's display image), and select 'Disable' to disable it.
Show Camera Name	Select 'Enable' to show camera's name on camera's display image, select 'Disable' to hide it.
Show Date	Select 'Enable' to show current date on camera's display image, select 'Disable' to hide it.
Show Time	Select 'Enable' to show current time on camera's display image, select 'Disable' to hide it.

Click 'Apply' for settings to take effect.

When OSD is enabled, selected OSD items will be displayed like this:

2.2.5 Night Vision

This camera equips with 9 IR LEDs to enhance video quality in the night. You can enable or disable IR LEDs by ‘Night Vision’ menu:



The descriptions of every setting in this menu will be given below:

Item	Description
Alaways** turn off IR led	Do not use IR LEDs, even it’s very dark.
Alaways** turn on IR led	Turn IR LEDs on, even it’s very bright.
Auto mode	Let camera decide to switch LED lights on or off automatically: LEDs will light up when it’s too dark. If you don’t know which option you should select in this page, select this one.
Turn on/off IR led by schedule	Switch IR LEDs on or off by schedule. You have to input start time in ‘Turn on IR led from’ section, and end time in ‘Turn off IR led from’ section.

Click ‘Apply’ for settings to take effect.

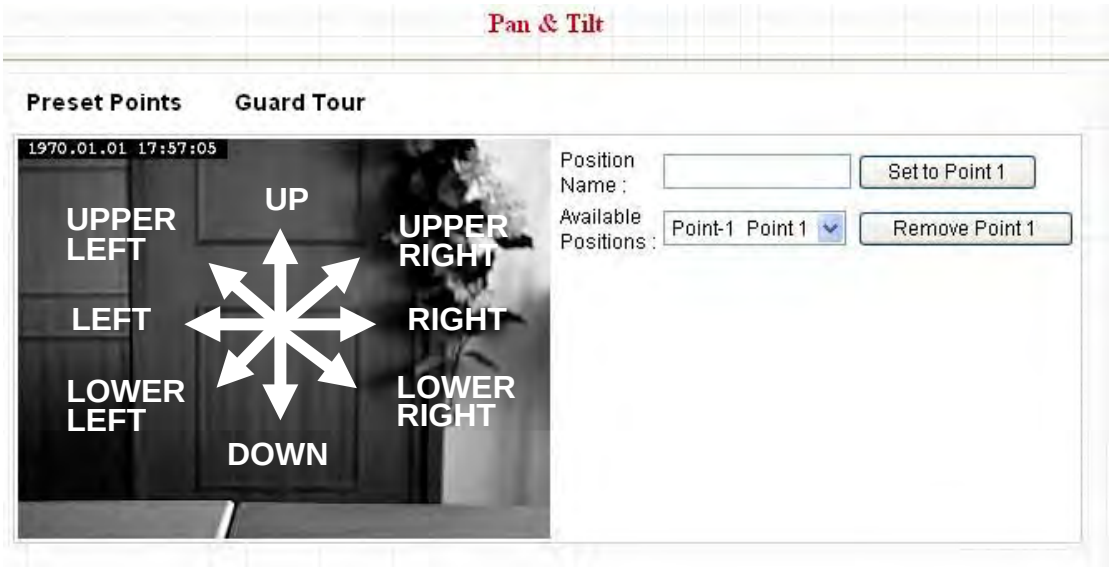
2.3 Pan and Tilt

This IP camera supports pan and tilt function, as you explored in last section. You can also make the camera move automatically in pan and tilt menu by defining a set of pre-defined path.

You can access this menu by clicking ‘PTZ’ on the top of web management interface.

2.3.1 Preset Points

You can define the camera position and save the position so you can recall the position later again. This camera provides 9 memory slots; follow the following instructions to move the camera and set a new preset point:



1. Select a memory slot from ‘Available Positions’ dropdown menu first.

2. To move the camera, click the position of labeled text (not shown on image) on the image to move the camera to the direction. You may need to set the Pan / Tilt speed to a slower setting, so you can move the camera in a more accurate manner.

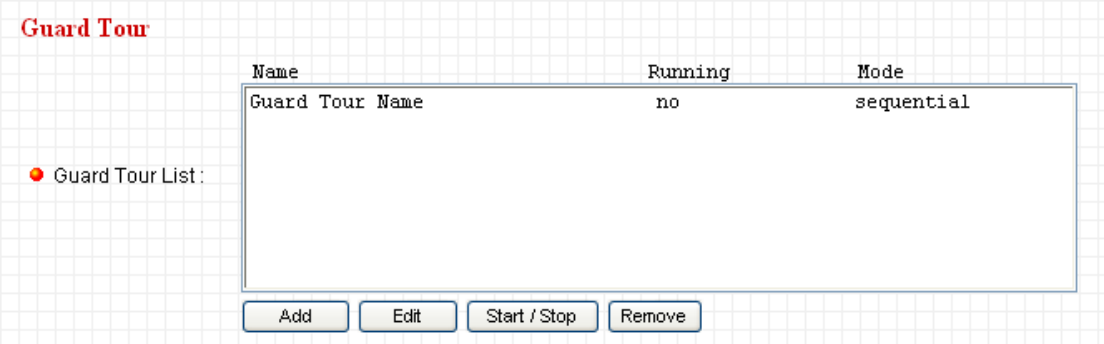
3. When you move the camera to the position you want, type a name in ‘Position name’ field, and click ‘Set to Point *n*’ (where ‘n’ is the number of memory slot) button to save the position to selected memory slot.

After you set the position, you can recall the position from ‘Camera’ menu (click the position number button), and the camera will move to preset position instantly.

If you want to remove a preset position, select the memory slot from ‘Available Positions’ dropdown menu, and then click ‘Remove Point *n*’, (where ‘n’ is the number of memory slot you wish to clear position setting).

2.3.2 Grand Tour

You can make the camera move between many pre-defined positions, and define the time you wish to pause at every position; this is called as ‘Grand Tour’.

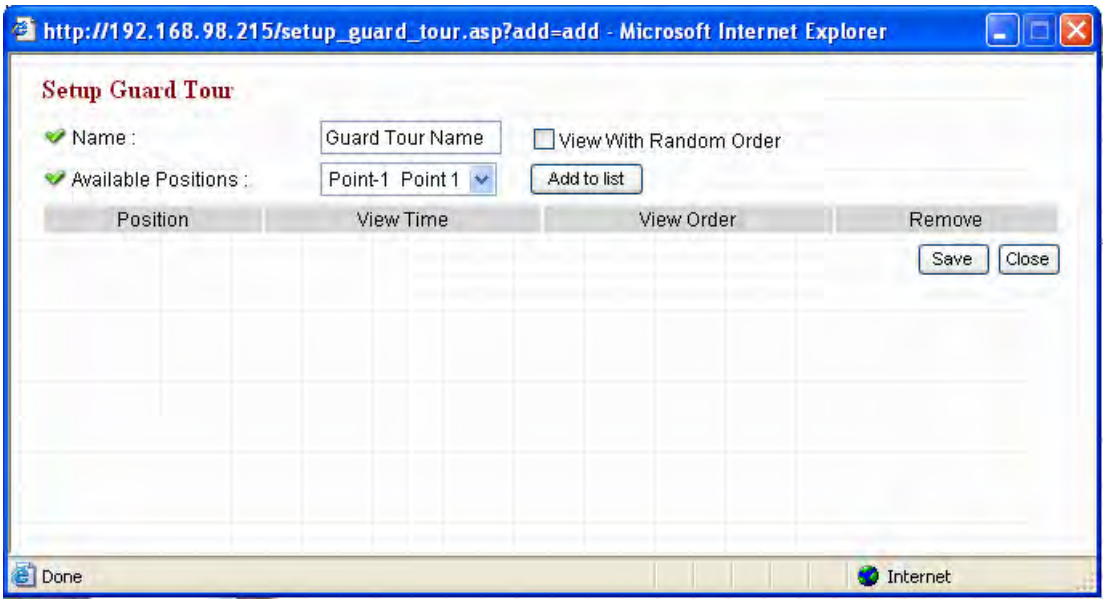


Before you can use this function, you have to define at least 2 positions in ‘Preset Points’ section (refer to last section for detailed information).

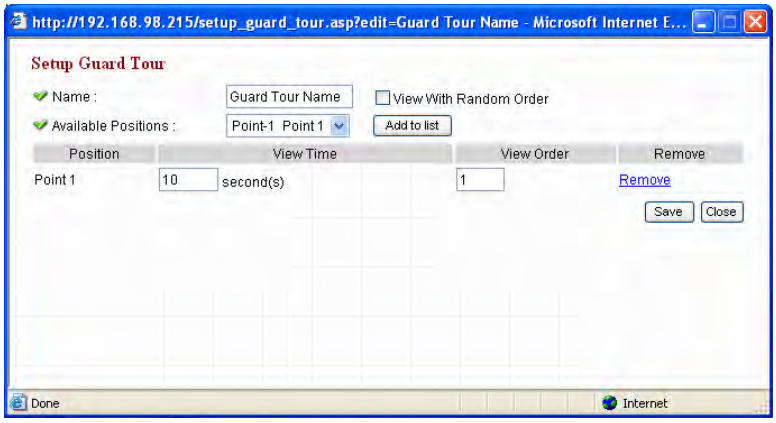
The descriptions of every setting in this menu will be given below:

Item	Description
Add	Add a new set of grand tour (see instructions below)
Edit	Edit a selected grand tour. The parameters for an existing grand tour will be recalled and you can modify them.
Start / Stop	Select a grand tour and click this button to start grand tour, click again to stop it. After a grand tour has been started, go to ‘Camera’ menu to see it in action. Only one grand tour can be activated at the same time.
Remove	Remove a grand tour from the list.

If you wish to add a new set of grand tour, click ‘Add’ to start to add a new grand tour set:



The descriptions of every setting in this menu will be given below:

Item	Description
Name	Input the name of this set of grand tour here. As you may have many sets of grand tour, please give it a meaningful name so you can remember the main purpose of this set.
View with random order	Do not visit all positions in this grand tour by order; visit them randomly instead.
Available positions	Select preset points from dropdown menu here, then click ‘Add to list’ to add this position to this grand tour. When you click ‘Add to list’, you’ll be prompted to set these parameters: 

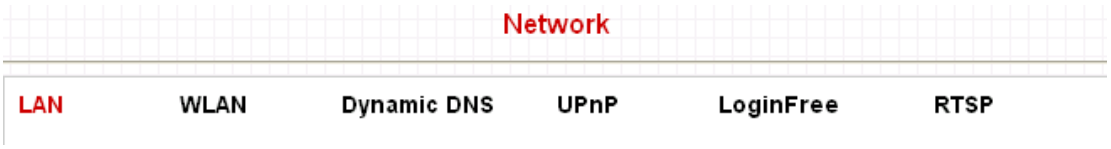
	View Time: Define the time you wish the camera to stop at this position in seconds. *View Order: Give this position a number greater than 1 and not the same with other positions, and grand tour will start visiting positions by order (from 1 to last number, and then start from 1 again).* *Remove: Remove this position from list.* *Save: Save settings for this position.* *Close: Close this window and discard all changes.*

2.4 Network Settings

All network-related settings can be found in this menu, and you have to specify TCP/IP parameters in this menu if you want to change IP address, use PPPoE, Dynamic DNS, and activate UPnP function.

You can access this menu by clicking ‘LAN’ on the top of web management interface.

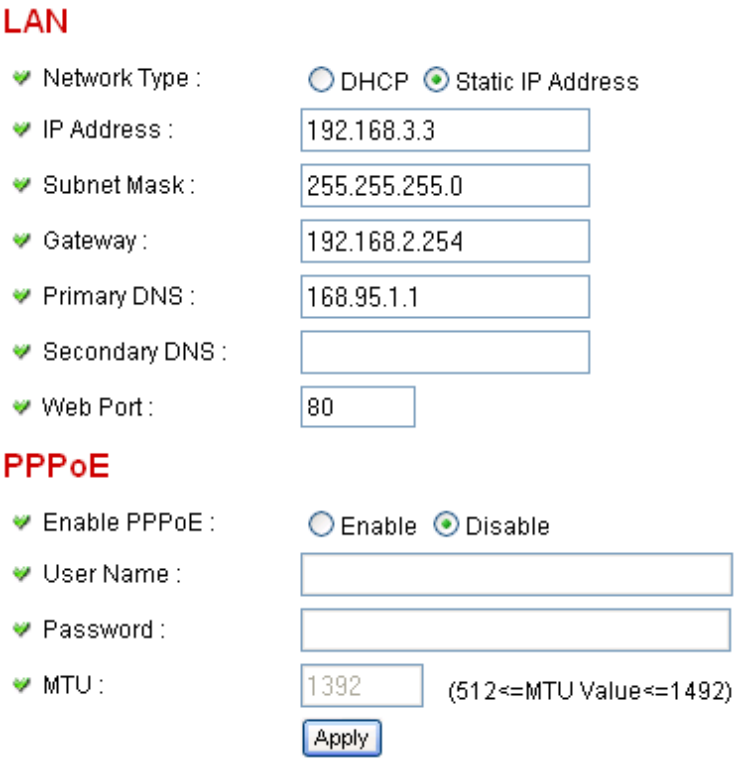
After you selected ‘Network’, network setting menu will appear. There are 6 sub-menus available here:



Please click the network setting you wish to set, and then refer to instructions given below:

2.4.1 LAN

You can define IP address and select the port number you wish to use here.

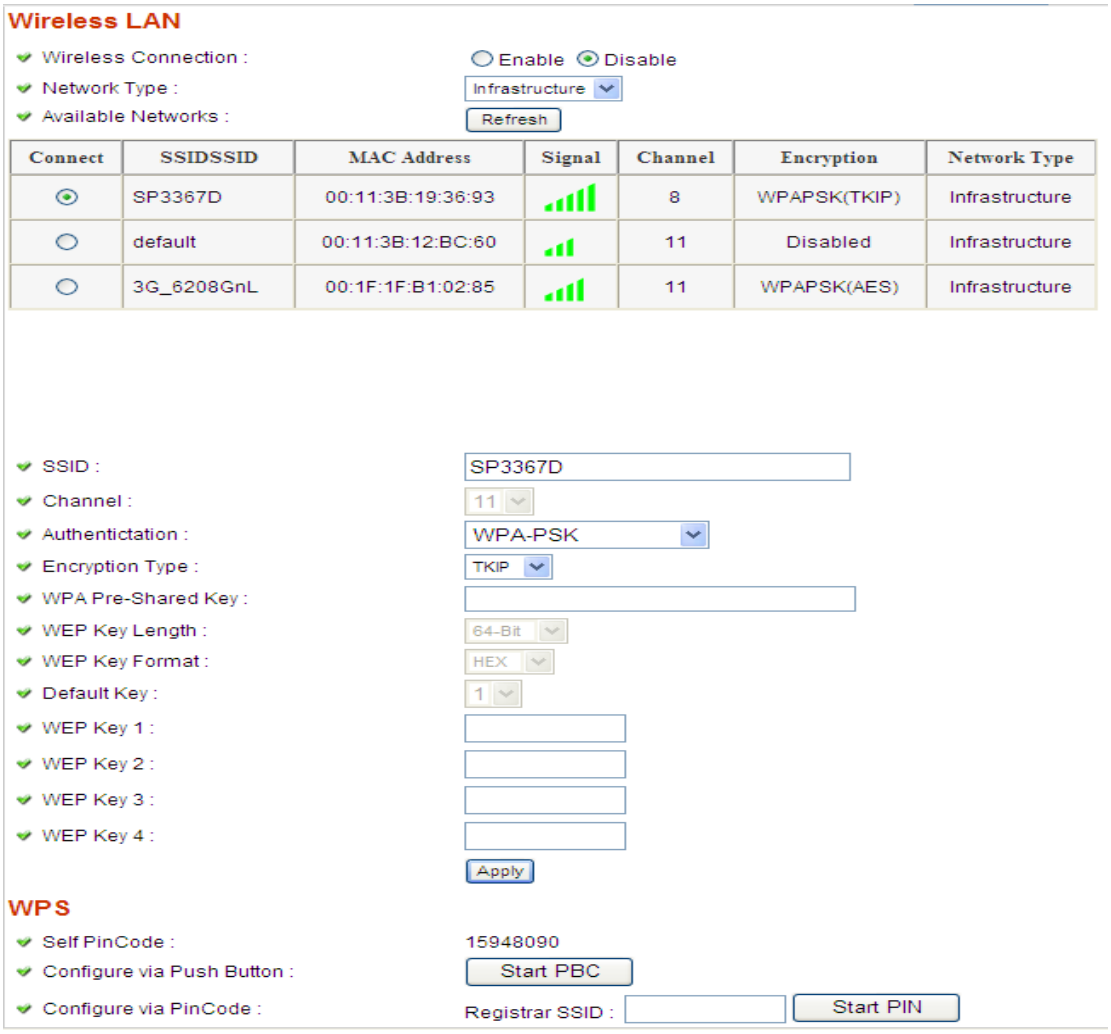


The descriptions of every setting in this menu will be given below:

Item	Description
Network Type	This camera can obtain the IP address from DHCP server automatically (if you have one), or set a fixed IP address. Select 'DHCP' to obtain IP address automatically or 'Static IP Address' to assign this IP camera with a fixed IP address. When 'DHCP' is selected, IP address parameters below will be grayed out.
IP Address	Specify the IP address for this IP camera here.
Subnet Mask	Specify the subnet mask for this IP camera here.
Gateway	Specify the gateway address of the local network here.
Primary DNS	Specify the IP address of DNS server here. Please input IP address only. If you don't know the address of DNS server, ask network administrator or your ISP for help.
Secondary DNS	Specify the IP address of backup DNS server here. When primary DNS is unreachable, IP camera will use the IP address specified here as DNS server. *This field is optional.*
Web Port	Specify the port number of web management interface here. If it's not 80, you'll have to add ':*port'* after the IP address / hostname of this IP camera. For example, if the HTTP port number you specified here is 90 and the IP address of IP camera is 10.20.20.30, then you have to input *'http://10.20.20.30:90'* in the address bar of Internet explorer.
Enable PPPoE	Select 'Enable' to activate PPPoE function of this IP camera, select 'Disable' to disable it.
User Name	Input the PPPoE username assigned by your ISP here.
Password	Input the PPPoE password assigned by your ISP here.
MTU	Input the MTU (Maximum Transmission Unit) given by your ISP here. Ask your ISP if you don't know what value you should input here. Default value should work with most of ISPs and will give you a nice network performance.

Click 'Apply' to save settings and make the new settings take effect.

2.4.2 WLAN



The descriptions of every setting in this menu will be given below:

Item	Description
Wireless Connection	Select ‘Enable’ to activate wireless network function of this IP camera, select ‘Disable’ to disable it.
Network Type	Select the network type of wireless connection. Available options are ‘Infrastructure’ (Connect the IP camera to a wireless access point), and ‘Adhoc’ (This IP camera will become a stand-alone wireless network point, other wireless computers / devices can discover this IP camera and connect to it without wireless access

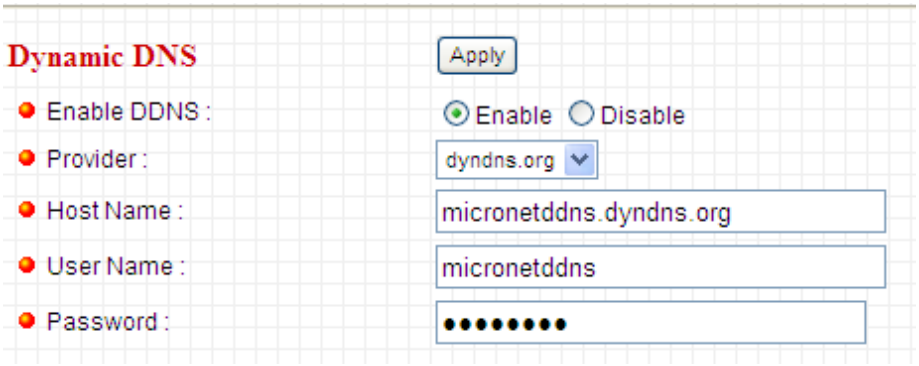
	point). You can set to ‘Adhoc’ when you don’t have any wireless access point, but your computer has wireless network card. Set to ‘Infrastructure’ when you have wireless access point, and you have computers with wired network connection.
Available Networks	Here shows all wireless access points found by this IP camera. Please note not all access points will be displayed at the same time, if the access point you expected to connect does not appear, you may have to click ‘Refresh’ button for several times until it appears. The descriptions of all fields is listed below: Connect: You can select the wireless access point you wish to connect here. SSID: the SSID of all found wireless access points will be shown here. Some wireless access point may hide their SSID; in this case, you have to identify them by their MAC address. MAC Address: If you there are many wireless access points in proximity or some wireless access point hides it’s SSID, you can use MAC address to distinguish them. Signal: Shows the radio signal strength in percent. Channel: Shows the radio channel of this wireless access point. Encryption: Shows the encryption type used by this wireless access point. You must use the same encryption type if you wish to connect to a certain wireless access point. If the wireless access point does not use encryption, ‘Disabled’ will be displayed here. Network Type: Shows the network type of a certain wireless access point (Infrastructure or Adhoc).

SSID	Input the SSID of the wireless access point you wish to connect. It should be less than 32 alphanumerical characters. When you select a wireless access point above, it's SSID will be filled in this field automatically. However, if the SSID is not displayed (the wireless access point you selected choose to hide it's SSID), you have to know it's SSID and input it here, or you will not be able to connect it.
Channel	Select the radio channel you wish to use here. When network type is 'Infrastructure', the radio channel is auto-selected according to the channel that wireless access point uses. You can only select the channel number when network type is 'Adhoc'.
Wireless Key	Input the encryption key of selected wireless access point here. This is required when access point you wish to connect uses encryption.
Self PinCode	Here displays the WPS pin code used to connect to WPS-enabled wireless access points. You have to input this number into the WPS enabled access point to establish WPS connection.
Configure via Push Button	Click this button and this camera will enter PBC-style WPS connection state for 120 seconds. Please push 'Start PBC' button on the wireless access point you wish to connect within 120 seconds to establish WPS connection (The remaining time will be displayed on the button). If connection can not be established after 120 seconds, you'll be prompted by a message box, and you can press 'Start PBC' button to try again.
Configure via PinCode	If you have wireless access point's WPS PIN code, you can input it here and press 'Start PIN' button to start to establish PIN-style WPS connection.

2.4.3 Dynamic DNS

If your ISP does not give you a fixed Internet IP address (i.e. the Internet address you're using when you access the Internet is not always the same – ask your ISP for detailed information), you can use this function to help you locate the IP address of this IP camera when you're away from home or office.

Before you can use this function you have to sign up for DDNS service with the service provider first. You'll need to apply for an account at dyndns.org (http://www.dyndns.org) or no-ip.org (http://www.no-ip.com). Please connect to the service provider's website for detailed instructions of how to apply a new account and to make sure the service charges.



The descriptions of every setting in this menu will be given below:

Item	Description
Enable DDNS	Select 'Enable' to activate Dynamic DNS function of this IP camera, select 'Disable' to disable it.
Provider	Select dynamic DNS service provider here.
Host Name	Input dynamic DNS host name here.
User Name	Input dynamic DNS user name here, must be the same as the one you applied on dyndns.org.
Password	Input dynamic DNS password here, must be the same as the one you applied on dyndns.org.

Click 'Apply' to save settings and make the new settings take effect.

2.4.4 UPnP

When UPnP function is activated, all UPnP-compatible computers / network devices will be able to discover this IP camera automatically (only those in the same local network).

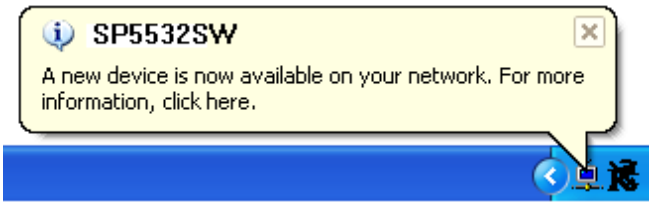
This function is useful and you don't have to remember the IP address of this IP camera. Simply open 'Network neighbor' and it's there!

The descriptions of every setting in this menu will be given below:

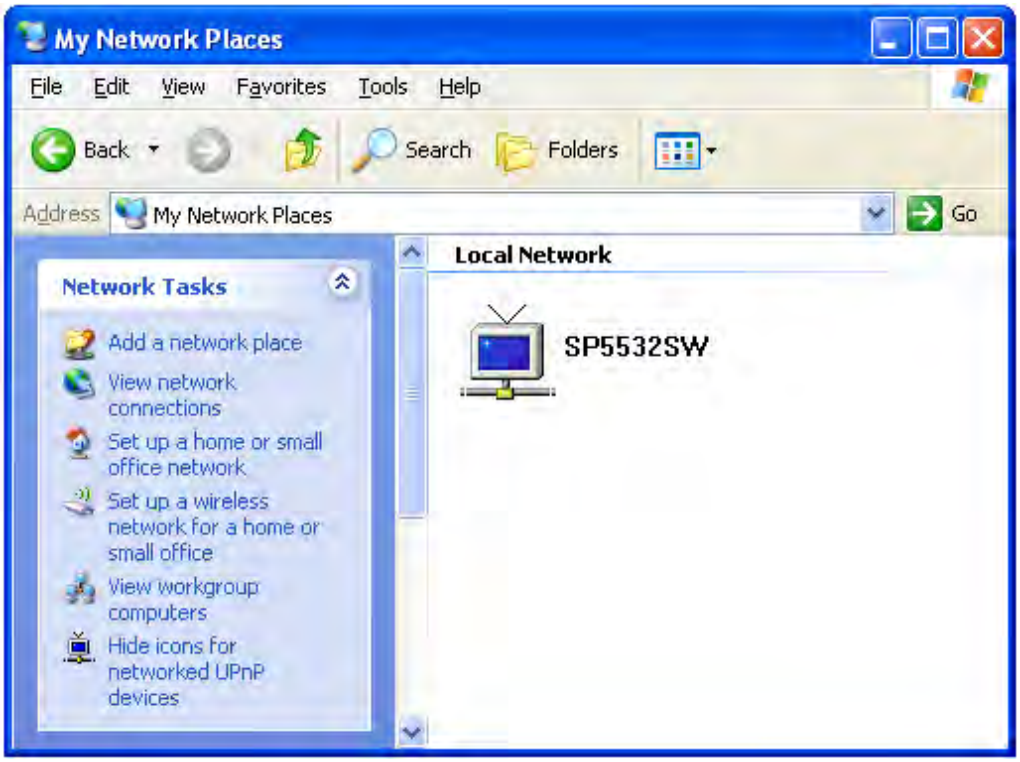
Item	Description
Enable UPnP	Select 'Enable' to activate UPnP function of this IP camera, select 'Disable' to disable it.

Click 'Apply' to save settings and make the new settings take effect.

After UPnP function is activated, a popup message will appear:



Click the message to open ‘My Network Places’, and you’ll see the IP camera:



You can double-click the icon to launch Internet Explorer and log onto IP camera’s web management interface directly.

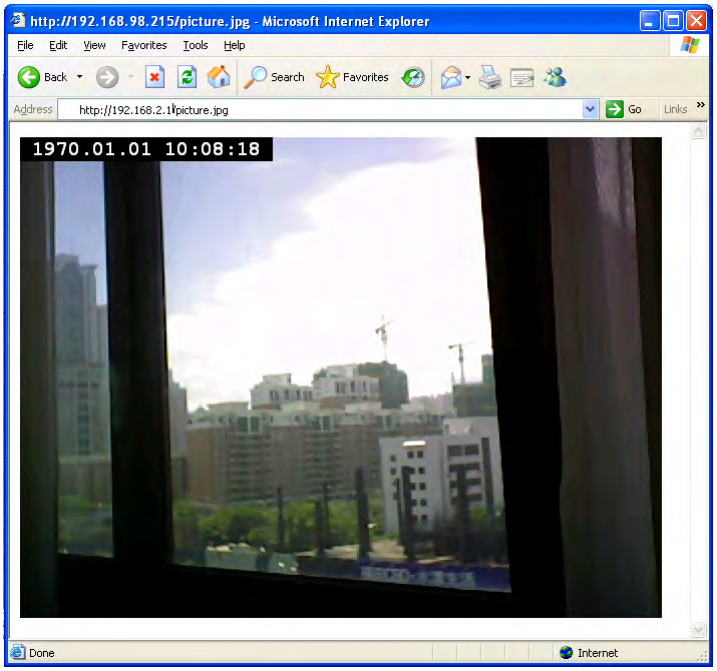
2.4.5 LoginFree

This camera provides a method to let unauthorized users to view the image captured by this camera, which is called as ‘LoginFree’. When you wish to let everyone to view the image captured by this camera, or integrate the image with your own web application, you can use this function:

Input the filename here, and click ‘Apply’ to save settings, then other users can access the image by this filename with .jpg extension with the camera’s IP address as prefix. For example, if your camera’s IP address is ‘192.168.1.2’ and the filename you set here is ‘picture’, then everyone on the web can access the image captured by this camera by using the following address:

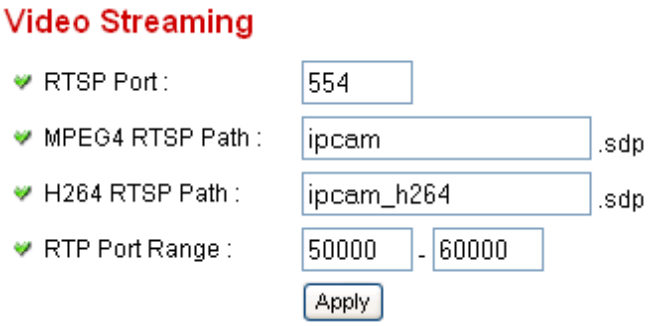
http://192.168.1.2/picture.jpg

Please note that no authentication will be required to see the captured image. If you wish to disable this function, clear the text in ‘Filename’ field and click ‘Apply.



2.4.6 RTSP

If you want to watch video captured by this IP camera by your own RTSP (Real Time Streaming Protocol) media player, you can use this function to setup RTSP parameters, so your RTSP-compatible player will be able to receive video data.



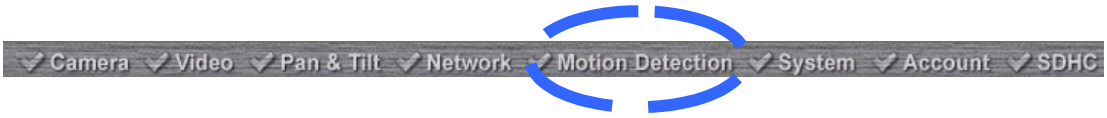
The descriptions of every setting in this menu will be given below:

Item	Description
RTSP Port	Input the port number of RTSP here. Default setting is 554.
MPEG4 RTSP Path	Input the path of MPEG4 RTSP video file. When you use RTSP-compatible media player to play RTSP stream, please remember to add '.sdp' file extension.
H.264 RTSP Path	Input the path of H.264 RTSP video file. When you use RTSP-compatible media player to play RTSP stream, please remember to add '.sdp' file extension.

2.5 Motion Detection

When you wish to use this camera to monitor the activities, motion detection function will be very useful. Camera will detect the motion in captured image, and take a snapshot when motion is detected. So you can use this camera to keep the safety of the belongings you have.

To use motion detection, click the following link from the top of menu:

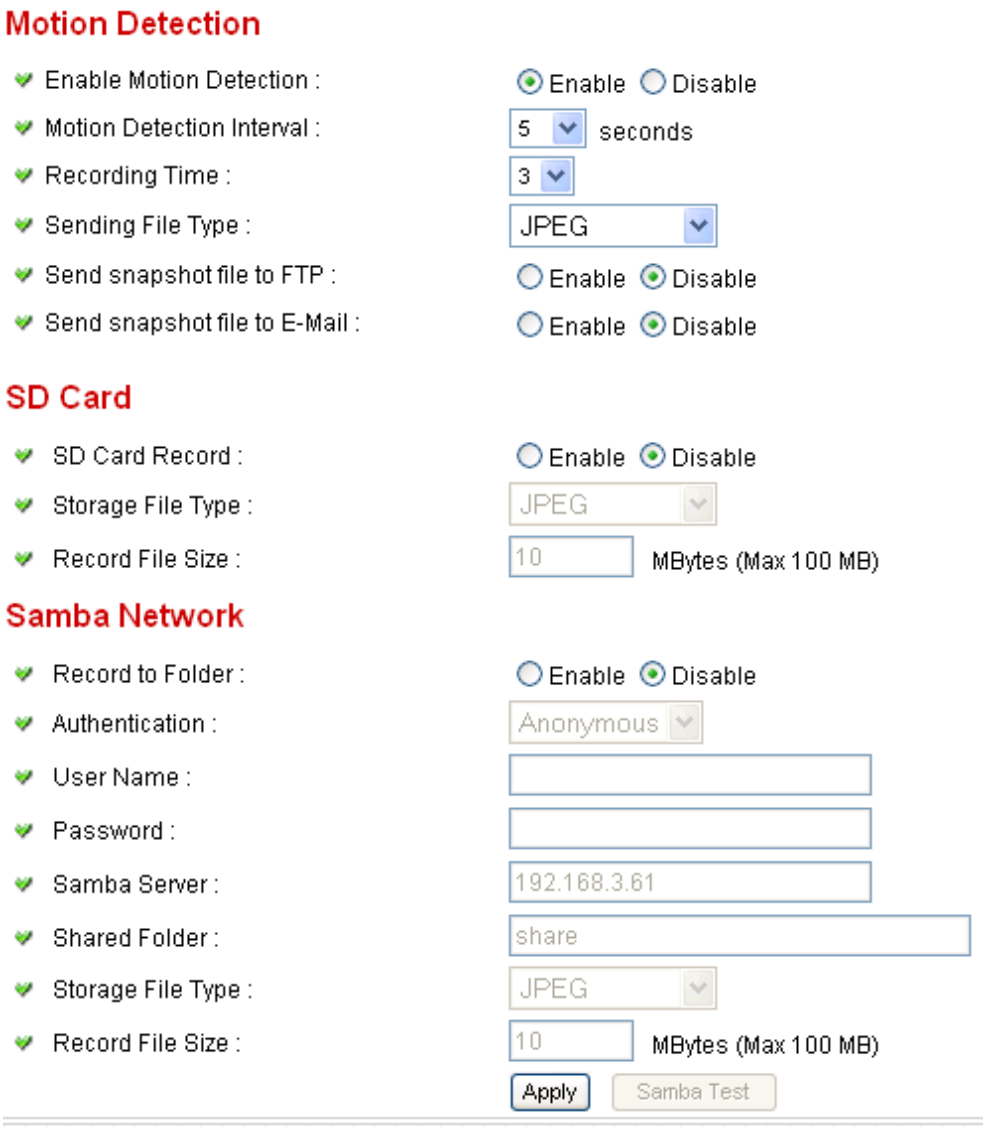


After you selected ‘Motion Detection’, a sub-menu will appear. There are 5 sub-menus available here:

Detailed descriptions of every setting will be given below.

2.5.1 Motion Detection

You can use this menu to setup basic motion detection settings:



The descriptions of every setting in this menu will be given below:

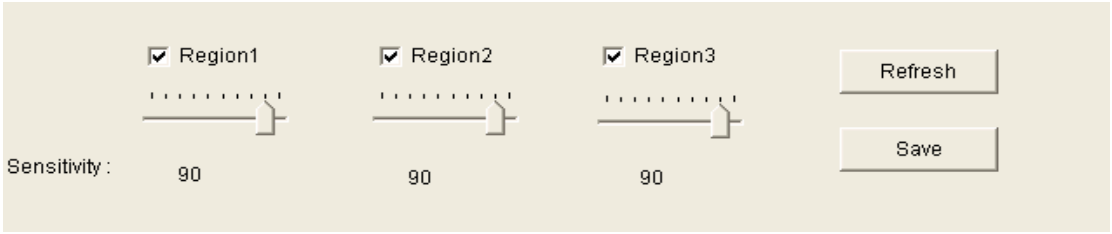
Item	Description
Enable Motion Detection	Select ‘Enable’ to enable motion detection, and select ‘Disable’ to disable this function.
Motion Detection Interval	Select the time interval between two motions from dropdown menu. When a motion is detected, camera will not detect any motion again within the time interval you specified here. Available options are from 0 second (always detect new motion) to 60 seconds.

Recording Time	Select the duration you wish this camera to record image when a motion is detected from dropdown menu. Available options are 1, 2, 3, 4, and 5 (seconds).
Sending File Type	Select the file type that will be saved when a motion is detected. Select ‘JPEG’ and a still picture in JPEG format will be saved; and select ‘AVI’ to save a motion video clip.
Send snapshot file to FTP	Select ‘Enable’ to send the saved file to appointed FTP server when a motion is detected, select’ Disable’ to disable this function. You have to configure FTP server parameters in ‘FTP Configuration’ menu first, so this function will take effect (see below).
Send snapshot file to E-Mail	Select ‘Enable’ to send the saved file to appointed E-mail address when a motion is detected, select’ Disable’ to disable this function. You have to configure mail server parameters in ‘FTP Configuration’ menu first, so this function will take effect (see below).
SD Card Record	Select ‘Enable’ to record detected motion to SD card (if there’s one), and select ‘Disable’ to disable this function.
Storage File Type	Select saving file type for motion detection: JPEG (still picture) or AVI MPEG4 / AVI H264 (for motion picture).
Record File Size	Input the maximum file size of saved file in Mbytes. Maximum file size is 100.
Record to Folder	Select ‘Enable’ to save file to a network folder which supports SAMBA (also known as ‘Windows Network Neighborhood’), select ‘Disable’ to disable this function.
Authentication	If username and password are not required to write files in specified folder, select ‘Anonymous’; if required, select ‘Account’.
User Name	Input user name required by destination network folder.
Password	Input password of the user name required by destination network folder.
Samba Server	Input the IP address or host name of network file server.
Shared Folder	Input the folder name on file server.
Storage File Type	Select saving file type for motion detection: JPEG (still picture) or AVI MPEG4 / AVI H264 (for motion picture).
Record File Size	Input the maximum file size of saved file in Mbytes. Maximum file size is 100.

Click ‘Apply’ to save settings and make the new settings take effect.

2.5.2 Motion Region

You can define the motion detection region within the image that camera captures, so this camera will ignore motions which are not covered by the motion region setting, and reduce the chances of false alarm.



The descriptions of every setting in this menu will be given below:

Item	Description
Region 1 – 3	Check the box to enable motion detection region 1 to 3. You can check multiple boxes to enable multiple motion detection regions. When you checked a box, a new region (and region number) will be displayed on captured image.

Sensitivity	Move the slide bar to change the motion detection sensitivity setting: Drag the slide to the right to increase sensitivity (camera will detect minor changes in the image), and drag the slide to the left to decrease sensitivity (camera will only detect major changes in the image).
Refresh	In case the objects of the image captured by the camera moved, click this button to reload the image captured by camera, so you can decide the motion detection region more precisely.
Save	Save motion detection region settings.

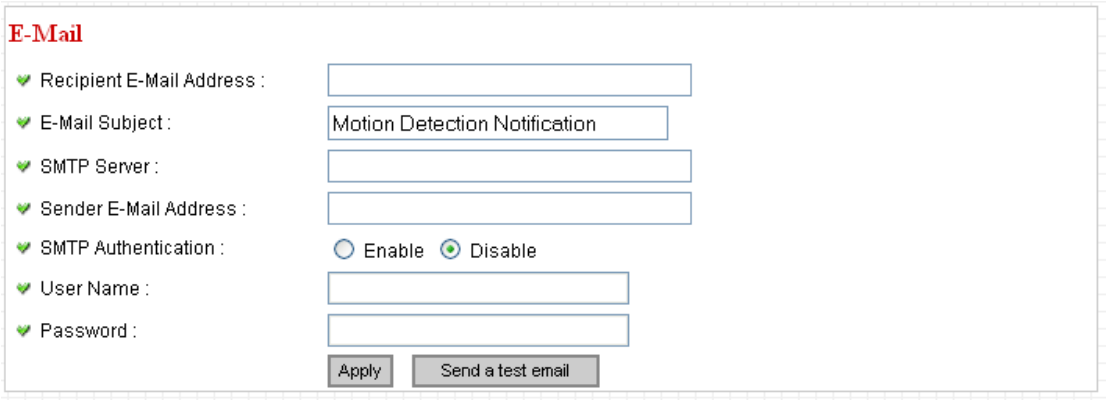
To change the motion detection region, you can ‘resize’ and ‘reposition’ it:

Move the mouse cursor to the eight dots located at the border of motion detection region, and the mouse cursor will switch to ↔ , ⤡, or ↕ . You can click and hold mouse button and move the mouse to resize the motion detection region.

To move reposition the motion detection region, move the mouse within the motion detection region, and the mouse cursor will switch to ✥. Click and hold mouse button and move the mouse to reposition the motion detection region.

2.5.3 Email

You can define the destination address of E-mail sending and mail server parameters here.



The descriptions of every setting in this menu will be given below:

Item	Description
Recipient E-Mail Address	Input the email recipient's Email address here.
E-Mail Subject	Specify the title of sending email, so you can identify the mail sent from this camera from others quickly.
SMTP Server	Input the IP address or host name of the SMTP server (the server that delivers the Email for you) here. If you don't know, please refer to the SMTP server you're using in your Email software (like Outlook, Outlook Express etc.), or ask your network administrator or ISP.
Sender E-Mail Address	Input the Email address of mail sender, this will help you to identify the Email sent by this IP camera by sender's Email address. *NOTE: Some mail server would reject to deliver the Email from unknown sender, it's recommended to input your own Email address here, or any other actual one.*
SMTP Authentication	Some SMTP server requires mail senders to be authenticated before they can send Email. If your SMTP server requires you to do so, please select 'Enable', or

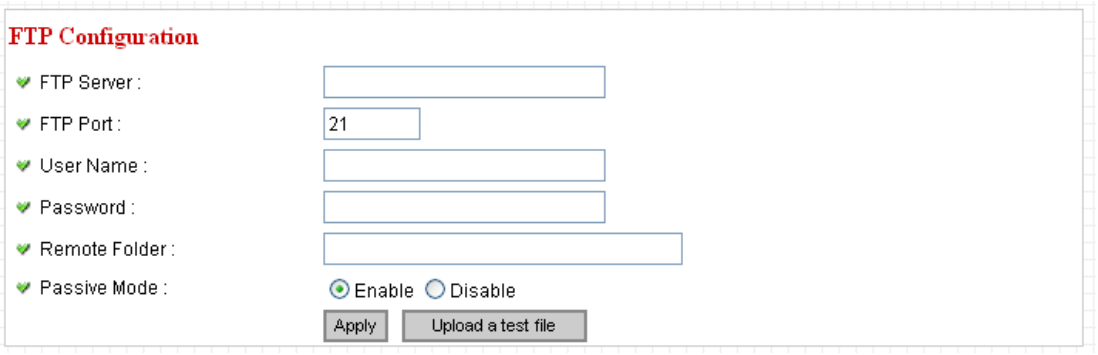
	select ‘Disable’ to disable it. If you don’t know, please refer to the SMTP server you’re using in your Email software (like Outlook, Outlook Express etc.), or ask your network administrator or ISP.
User Name	Please input the user name of SMTP server here, if your SMTP server requires the use of authentication.
Password	Please input the password of SMTP server here, if your SMTP server requires the use of authentication.

Click ‘Apply’ to save settings and make the new settings take effect.

After that, you can click ‘Send a test email’ to send a testing Email to the address you set here, so you can make sure the setting you specified here is correct and working.

2.5.4 FTP Configuration

You can set FTP server's parameters here.



The descriptions of every setting in this menu will be given below:

Item	Description
FTP Server	Input the IP address or host name of the FTP server you wish to use here.
FTP Port	Input the port number of the FTP server you wish to use here.
User Name	Input the user name of the FTP server you wish to use here.
Password	Input the password of the FTP server you wish to use here.
Remote Folder	Input the remote folder name on the FTP server here. If nothing is specified here, all uploaded image files will be placed in FTP server's root directory. Please ask FTP server's administrator to know which folder you should use. Certain user name may have restrictions and therefore can not place the file in the directory not owned by the user.
Passive Mode	Select 'Enable' to use passive mode to send file, or select 'Disable' to not to use passive mode to send file. Some FTP servers require passive mode, if you don't know, please ask FTP server's administrator; most of FTP servers will work fine with both modes, but if you

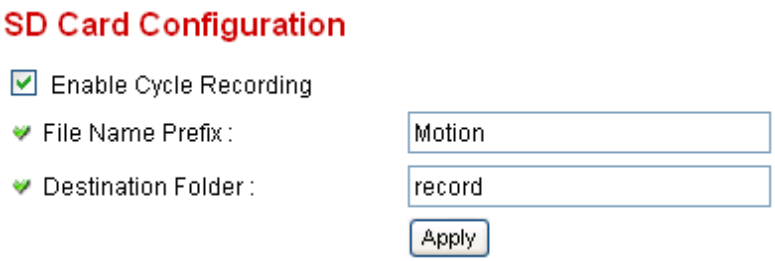
	found that non-passive mode is not working, you can try to use passive mode.

Click ‘Apply’ to save settings and make the new settings take effect.

After that, you can click ‘Upload a test file’ to send a file to the FTP server you set here, so you can make sure the setting you specified here is correct and working.

2.5.5 SD Card Configuration

You can define the filename and destination folder when saving a file in SD card.



The descriptions of every setting in this menu will be given below:

Item	Description
Enable Cycle Recording	Check this box and this camera will automatically erase oldest image file to make rooms for new image files when SD card is full. If you don't want to lose old image files, do not check this box.
File Name Prefix	Specify the filename prefix (the texts which will be added before the file sequence number).
Destination Folder	Specify the folder name that camera will store the saved image or video clip.

Click 'Apply' to save settings and make the new settings take effect.

2.6 System Info

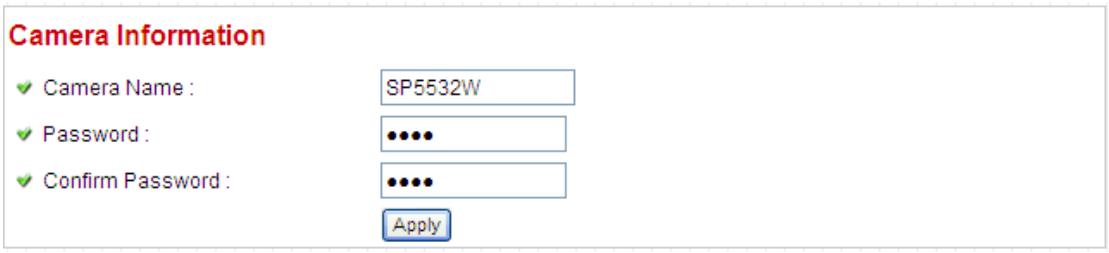
You can use this menu to get the operational information of this camera:

After you selected ‘System Info.’, a sub-menu will appear. There are 4 sub-menus available here:

Detailed descriptions of every setting will be given below.

2.6.1 Camera Information

Camera information allows you to set the name and administrator's password of this camera.



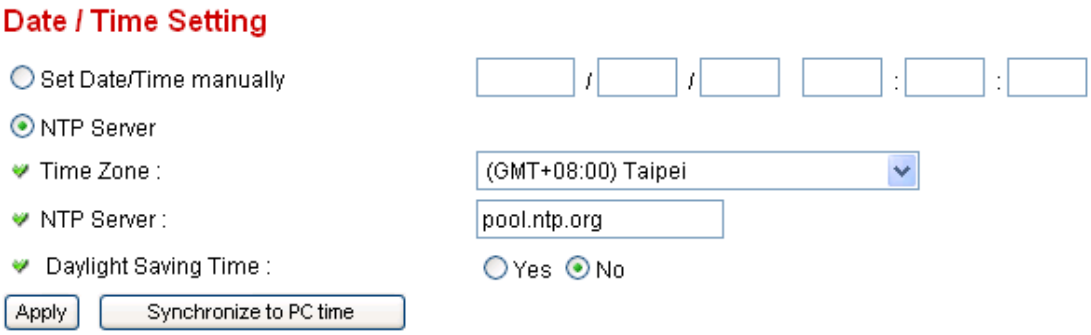
The descriptions of every setting in this menu will be given below:

Item	Description
Camera Name	Please specify the name of this IP Camera here. This can be used to identify your camera on the network when you have more than one IP camera in the same network. Default name begins with 'IC-' plus the last 6 characters of the MAC address of this IP camera. You can modify the name to the one you can remember and meaningful to you, but never give all IP cameras in the same network with same name.
Password	Please specify user name 'admin' 's password here. (The one you need when you log onto web management interface and use 'admin' as user name.
Confirm Password	Please input the same password again, to make sure there's no typo.

Click 'Apply' to save settings and make the new settings take effect.

2.6.2 Date / Time Setting

This setting allows you to change the date and time of the real time clock in this IP camera. You can set the time manually, or use network time protocol (NTP) to set the time automatically.



The descriptions of every setting in this menu will be given below:

Item	Description
Set Date/Time manually / NTP Server	If you select 'Set Date/Time manually', you can set the date and time of this camera manually. Please input the date and time you wish to set here. Date / time format is YYYY / MM / DD HH:MM:SS Time is in 24-hour format. You can click 'Synchronize to PC time' to use the time of the computer you're using. *Example: 24th August 2007 = 2007/ 08 / 24,* *and PM 9:24:30 = 21:24:30* If you select 'NTP Server', the camera will get the date and time from NTP Server automatically.
Time Zone	Please select the time zone of the country / city of resident from dropdown menu here.
NTP Server	Please input the IP address or host name of NTP server here. You can use default value 'pool.ntp.org', or ask your ISP for the IP address or host name, if they have one.
Daylight Saving	If your area of residence uses daylight saving, select

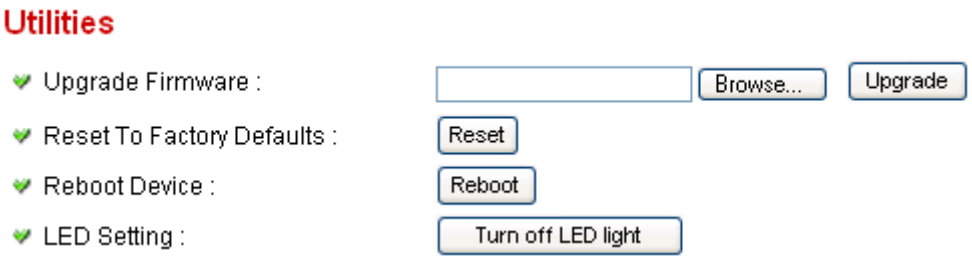
Time	‘Yes’; otherwise select ‘No’.
Synchronize to PC time	Click to input current time of your computer to ‘Set Date / Time manually’ field.

Click ‘Apply’ to save settings and make the new settings take effect.

If you wish to use the date and time setting of the computer which is connecting to the camera, click ‘Synchronize to PC time’ button. The date and time setting of the computer will be filled to date and time setting in this page.

2.6.3 Utilities

This menu allows you to upgrade firmware, clear all settings, reboot the IP camera, and switch LED lights on/off.



The descriptions of every setting in this menu will be given below:

Item	Description
Upgrade Firmware	If you downloaded latest firmware file from our website, you can click 'Browse' button to pick a firmware file located on your computer's hard drive and you can upload the firmware file to the IP camera later. After you selected a proper firmware file from your computer, click 'Upgrade Firmware' button to start upgrade. DO NOT DISCONNECT NOW! If the firmware file you provided is invalid of you didn't provide the firmware file, you'll be prompted to select another valid firmware file again. The IP camera will reboot after the upgrade procedure is done. **PLEASE NOTE THAT THE IP ADDRESS OF THE CAMERA WILL RESET TO DEFAULT VALUE: 192.168.1.2**
Reset to Factory Defaults	Clear all settings in the camera. Please think again before you do this, and then click this button to reset all settings. *NOTE: IP address will be reset to default value '192.168.1.2' also. You'll need to change the IP address*

	setting of your computer if the IP address of your computer does not begin with '192.168.1', and subnet mask is not '255.255.255.0', or you'll not be able to connect to this IP camera again.
Reboot Device	If you found the IP camera is responding slowly or behaves strange, you can click this button to try to reboot the IP camera, this may help.
LED Setting	Click 'Turn off LED light' button to switch the LED light of this IP camera off, so all LEDs on the IP camera will stop working, in case you don't want other people know the camera is transferring data. You can click this button again to switch LED lights on again.

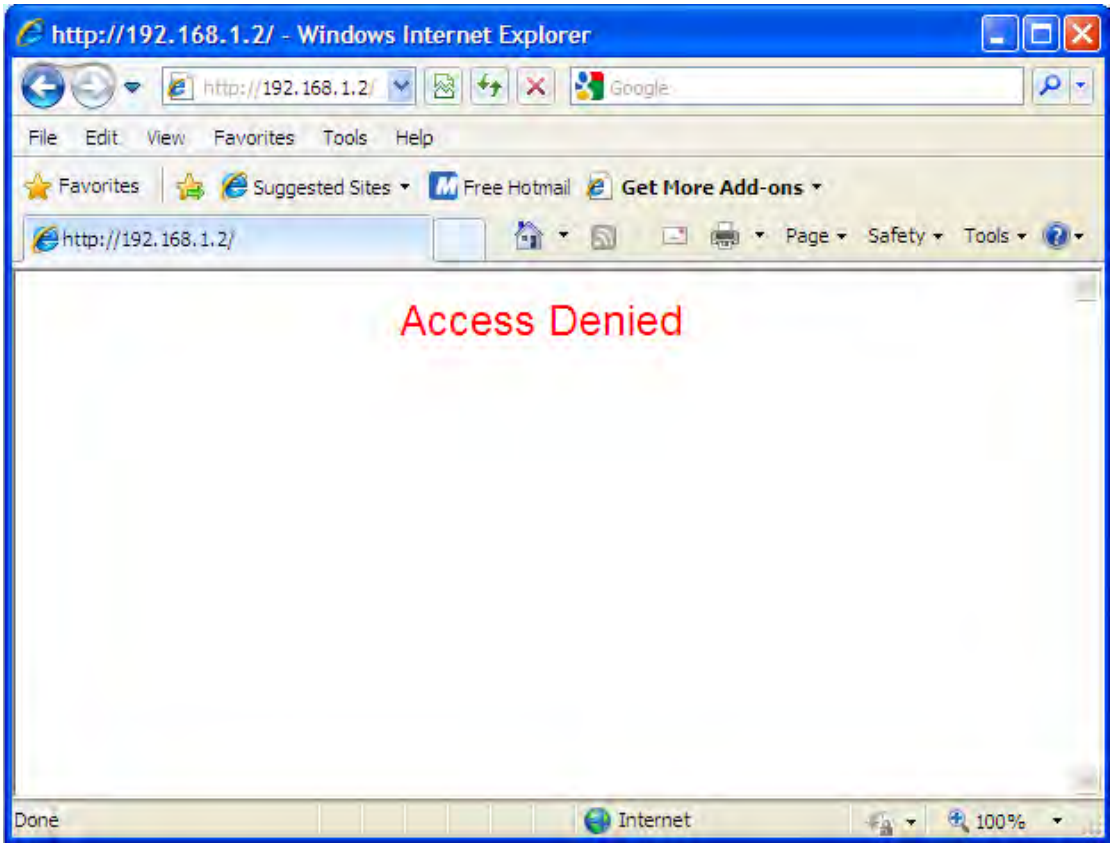
Click 'Apply' to save settings and make the new settings take effect.

2.6.4 Status

This menu provides all information about this IP camera, like firmware version, system uptime, date / time, and network information.

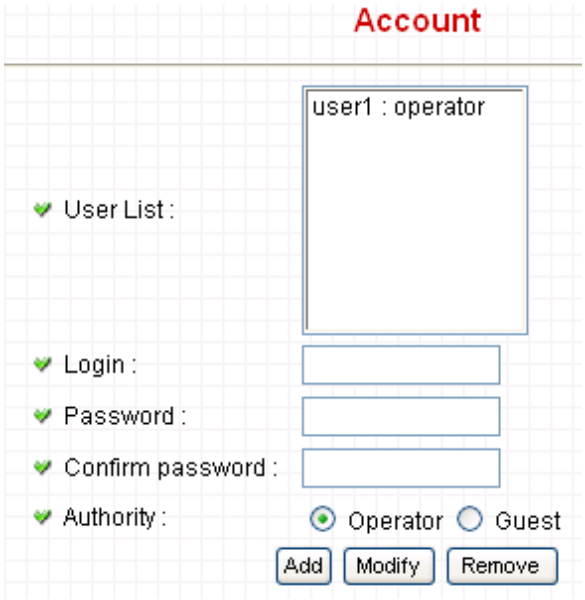
2.7 Account

If you wish to allow other people to view the live image captured by this camera, but don't want to allow them to modify system settings, you can give them user-level user name and password, so they can only view the image and can not change any system setting. When they want to click menus other than 'Camera', they will see the following message informing that they don't have permission to do that:



This camera supports up to 4** users.

After you selected 'Account', you'll be prompted to input user account information:



The descriptions of every setting in this menu will be given below:

Item	Description
User List	Lists all users currently available.
Login	Input the login name (user name) of this account.
Password	Input the password of this user here.
Confirm password	Input the password of this user here again for confirmation.
Authority	Select the privilege of this user: Operator (able to change system settings) or Guest (View images only).
Add	Click this button to add the account.
Modify	Modify an existing user's information. You have to select a user from user list first.
Remove	Remove an existing user. You have to select a user from user list first.

Click 'Apply' to save settings and make the new settings take effect.

Please note: only one user (including administrator) will be able to view the image of IP camera at the same time.

2.8 SDHC

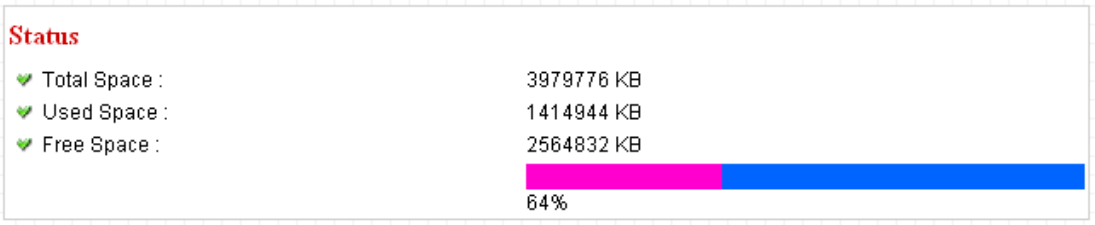
…

After you selected ‘System Info.’, a sub-menu will appear. There are 4 sub-menus available here:

Please click the SD card setting you wish to set, then refer to instructions given below:

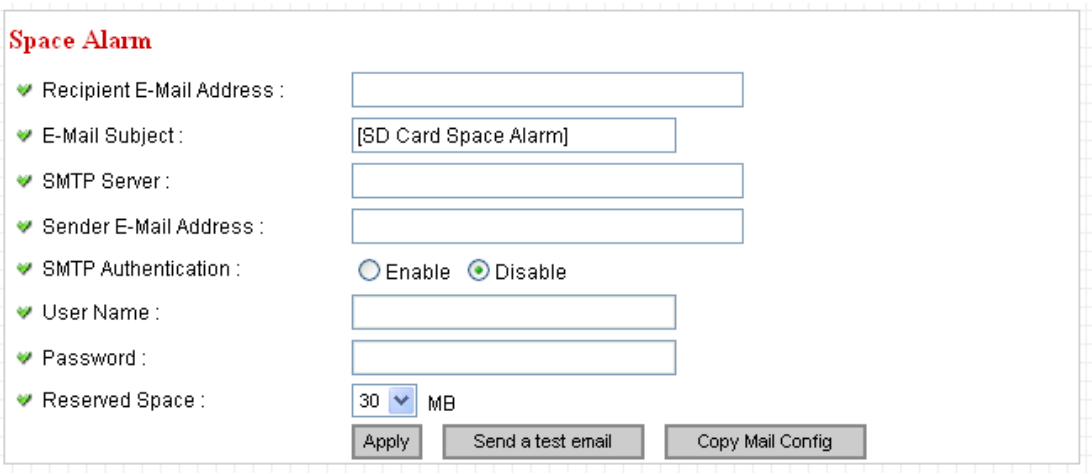
2.8.1 Status

Here shows the remaining card space for you.



2.8.2 Space Alarm

When you're using SD card to store captured image and video clip, you can have this camera to send an E-mail to you when there's only little remaining space left on SD card.



Please note: If you have set E-mail settings in 'Motion Picture' function, you can click 'Copy Mail Config' button to use the same setting. However, you can use a different setting here.

The descriptions of every setting in this menu will be given below:

Item	Description
Recipient E-Mail Address	Input the E-mail address you wish to receive space alarm.
E-Mail Subject	Input the title of space alarm E-mail.
SMTP Server	Input the SMTP server address you wish to use to send E-mail.
Sender E-Mail Address	Input the sender E-mail address of the space alarm E-mail.
SMTP Authentication	Select 'Enable' if the SMTP server you're using requires authentication, and input the username and password below; If the SMTP server you're using does not require authentication, select 'Disable' here. If you're not sure, ask your ISP or network administrator.
Reserved Space	Select the amount of SD card space which will be

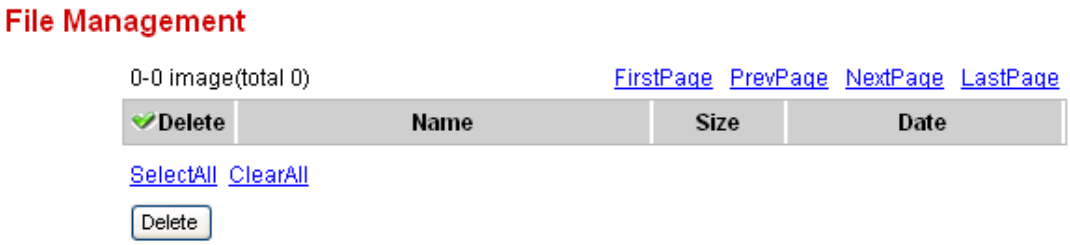
	reserved and will not be used from dropdown menu.

Click ‘Apply’ to save settings and make the new settings take effect.

You can click ‘Send a test email’ button to send a test E-Mail by the configuration you set here.

2.8.3 File Management

You can use this menu to manage the files stored on SD card.



The descriptions of every setting in this menu will be given below:

Item	Description
FirstPage	Jump to first page of file list.
PrevPage	Jump to previous page of file list.
NextPage	Jump to next page of file list.
LastPage	Jump to last page of file list.
SelectAll	Select all files in this page.
ClearAll	Clear all files in this page.
Delete	Delete selected files.

Chapter III: Appendix

3.1 Specification

Max Resolution: 1280 x 1024 pixels
Sensor: 1.3Mega Pixel 1/4" color CMOS sensor
Day/Night: 9 IR LEDs
Pan/Tilt: 355° Pan, 120° Tilt
Gain control: Automatic
Exposure: Automatic
White Balance: Automatic
FNO.=2.0

Image (Video Setting)
Image compression: MJPEG/MPEG4/H.264 Image Video
Frame rate: 30fps@VGA,QVGA, 10-15fps@SXGA,XGA
Video resolution: MJPG/H.264 1280x1024/640x480/320x240
MPEG4 1024x768/640x480/320x240

System Hardware
LAN Connector: One RJ-45 port to connect to 10/100Mbps Ethernet
Wireless: IEEE 802.11b/g/n (*Wireless Model Only)
LED Indicator: Power/Audio/Activity or WLAN/LAN

HTTP/Utility
Includes easy-to-use Viewer & Recorder utility
Provides Admin utility & WEB browser Management
View multiple cameras simultaneously - Up to 16 cameras at a time
Supports four additional user accounts for viewing camera
Auto sending Snap Shot by E-mail or FTP
Support DDNS and UPnP functions
Supports Windows 2000/XP/Vista/7
Firmware Upgradeable

EMI & Safety
FCC, CE Class B

3.2 Troubleshooting

If the IP camera is not working properly, before you contact the dealer of purchase for help, please check the troubleshooting list here, this may help you to solve the problem by yourself and therefore saves your valuable time.

Scenario	Possible Solution
I can not connect to IP camera	a. Please confirm the IP address setting of the computer you're using. If they're not in the same subnet, they will not be able to communicate with each other. b. Please make the IP address you used to connect to the IP camera is correct. c. If you forget the IP address of the IP camera, you will have to reset it to factory default value (which is 192.168.1.2) by pressing 'reset' button at the bottom of the IP camera. You'll need a pen or pin to be able to press the reset button. Press and hold reset button for 5 seconds, then try to connect to the IP camera with IP address '192.168.1.2' again. d. Please make sure IP camera is correctly powered (the 'Power' LED should be on). e. If you're trying to connect to the IP camera from Internet, please make sure the port that IP camera uses (Video and HTTP port) is not blocked by firewall or other software / hardware. f. Contact dealer of purchase for help, if above solutions do not work.
Image refreshes very slow	a. Try a higher frame rate setting, if it's not 30. b. Try a lower resolution.

	c. If you're connecting this camera from Internet, it could be caused by a slow Internet connection, and it's not a problem caused by camera. However, when the network connection is slow, you should use lower frame rate / resolution. d. Adjust the antenna if you're using wireless connection. The antenna should be perpendicular to the ground to get best reception, and the distance between IP camera and computer / wireless access point should not be too far. e. Try to adjust 'MTU' setting if you're using PPPoE to connect to Internet. Ask your ISP or network administrator for detailed instruction.
IP camera is not responding	a. Is the network cable or wireless connection disconnected? Please check it. b. Unplug the power adapter from wall socket and plug it in again after 10 seconds, then try to connect to the IP camera again. c. If IP camera is correctly powered ('Power' LED is on), but you still can not connect to the camera when you're sure that IP address is correct, please contact dealer of purchase for help).
Image is fuzzy	a. Adjust the focus ring on the camera until the image becomes clear. b. Use a soft cloth to clean the lens on the camera. You can use cloth with water, but *DO NOT* use alcohol or other chemical solution. c. Try to adjust brightness setting. d. If there's any light at the place where IP camera is located, switch it on and see if image looks better.

I set the IP camera to send image by Email or FTP, but nothing is received	a. If the image is send by Email, please make sure it's not blocked by any anti-spam mechanism. b. Please make sure you have enough permission for FTP uploading (You can try this by clicking 'Upload a test file' button). c. Make sure the user name and / or password of SMTP server is correct, if your SMTP server requires authentication (You can try this by click 'Send a test Email' button). d. Please check log, if FTP upload or Email sending is failed, it will be logged, and this may give you some clue on how to solve the problem. e. Change the threshold to a more sensitive setting.
I heard strange sound when I use pan / tilt function	a. Please check if anything jams the camera, remove it. a. If the camera does not respond to you when you're trying to use pan / tilt function, the servo motor inside the camera may dead. Please return the camera to the dealer of purchase and ask for help.
Nothing is heard at the camera side when I use 'Speak to IPCam' function	An external speaker is required to playback the voice received at computer side.